

**The Vegetation of Mt. Sôgadake,  
The Japan North Alps\***

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僧ヶ岳（1855 m）は、北アルプス立山連峰が日本海におちる最北端の位置にある。山塊効果が著しく、また、日本海季節風の影響を強く受けていて、これらと高山植生との関係が顕著に現われている。しかし、山稜が狭いこと、飲料水や登山施設がないことなどから調査は十分行われていない。

この調査報告は、1959年から1972年にかけて5回行った植生調査で得た資料から、維管束植物目録を中心にして作成した。

- 1 僧ヶ岳登山コース沿線および僧ヶ岳・駒ヶ岳間で、752種・180変種・28品種・1雑種の維管束植物を確認した。
- 2 富山県唯一分布種は、ヒメトラノオ・ニョホウチドリなど7種、同稀産種は、ベニシスラン・タカネイブキボウフウなど15種である。また、日本における最高位分布を示しているものは、ユキツバキ（標高1600 m）・クビキカンアオイ（標高1350 m）である。
- 3 日本における代表的な生垣状風衝矮生低木群落や風衝草原および低標高雪田植生や高山植物の遺存現象が認められる。
- 4 ブナ林の発達は不良である。標高700 mから1200 mにかけて、チシマザサ・ブナ群集のユキツバキ亜群集の典型林がある。また、日本海要素は豊富である。

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\* Contributions from the Toyama Science Museum, No. 5

## Introduction

Mt. Sôgadake is located at the northernmost part of the Japan North Alps, facing directly on the Sea of Japan. This mountain seems to be one of the most interesting places to investigate from ecological as well as phytogeographical point of view, since the area is constantly exposed to strong cold seasonal wind from the Sea of Japan during the winter, and thus there develops a characteristic subalpine-alpine vegetation. However, no sufficient botanical survey has been carried out until now because of the narrowness of ridges, scantiness of drinking water and lack of mountain cottages at high altitudes. Although several preliminary reports dealing with the flora, vegetation, and taxonomy of certain specific groups of plants, e. g., *Heterotropa*, in this area have so far been published by YOSHIZAWA (1940), NAGAI (1964, 1977), HONDA (1964), OHTA (1964, 1968, 1975), SHÔJI (1976, 1978), KIRINO (1976), MIYAWAKI (1977), and FUJIWARA (1976), no critical studies comprehensively covering the vegetation and flora of this mountain have so far been made.

The present paper attempts to describe the outline of the vegetation on Mt. Sôgadake, with a list of vascular plants indigenous to the area. This report is based on the botanical explorations over past five years from 1959 to 1972.

## Environment

### 1 Location and Topography

The Japan North Alps is divided into two mountain ranges by the River Kurobe at its head, *i. e.*, the Tateyama Range and Ushiro – Tateyama Range. Both ranges end nearly adjacent to the Sea of Japan. Mt. Sôgadake, with an altitude of 1885m above sea level, is situated at the northernmost end of the Tateyama Range, with peaks such as Mt. Maekoma, Mt. Kekachi (2414m), Mt. Nekomata (2378m), Mt. Akatani (2258m) and Mt. Tsurugi (2998 m) ranging from north to south. The peak of Mt. Sôgadake is situated at the junction of 137°34' E in longitude and 36°45' N in latitude. Mt. Sôgadake embraces a number of small valleys and tributary streams, many of which are united with main streams of the River Kurobe and River Katakai. On the east side of Mt. Sôgadake, there runs the River Kurobe and on the west, the River Katakai. On the northwest-facing slope, there runs another stream, River Fuse, with its head water in the valleys of Mt. Sôgadake. In the vicinity of the summit of the mountain, there are two flat areas called Hotokegadaira (1780m) and Gozen (1800m, but other neighbouring area of the mountain are formed by steep slopes and valleys. Mt. Sôgadake is located at the boundaries between Unazuki-machi, Kurobe City, and Uozu City. The ridge runs from north to south, and towers steeply from the plain.



# The Vegetation of Mt. Sôgadake, The Japan North Alps

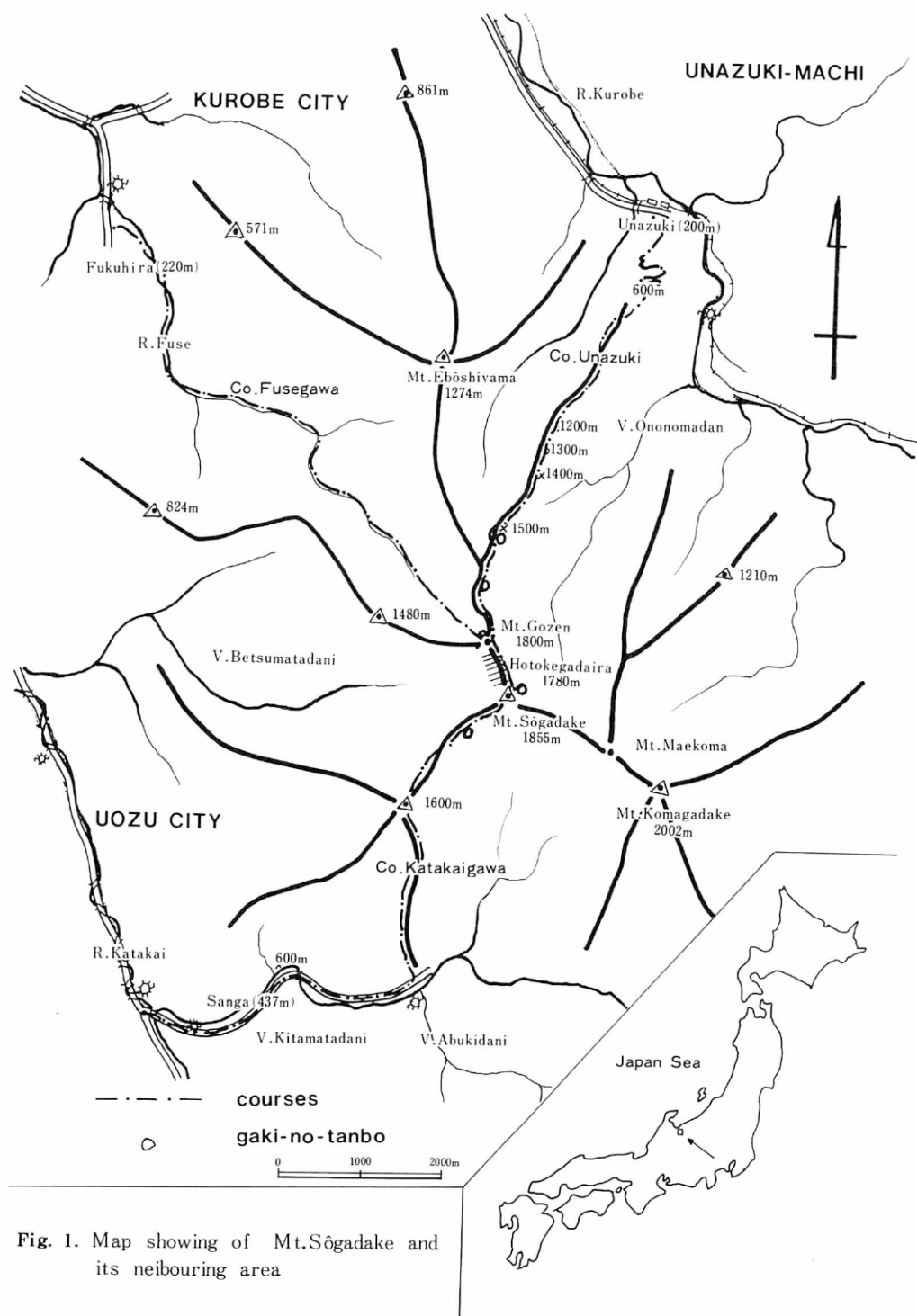


Fig. 1. Map showing of Mt.Sôgadake and its neighbouring area

## 2 Geology

Mt. Sôgadake belongs to the Hida metamorphic zone and mainly consists of meta-gabbro and Augen gneiss (FUKAI, 1964). Sericite-staurolite is found at the point of 1250 m above sea level in altitude of the Unazuki course. Also, an outcrop of limestone occurs at the point of 1300 m above sea level of Unazuki course. Near the head-waters of Ononumadan, a tributary stream of the River Kurobe, veins of molybdenum and chalocoporite were excavated during the World War II. In Hotokegadaira and Gozen, porphyrite (OHONO, 1977), crashed igneous rock, is also found. The origin of these rock crashes is unknown, but judging from the flat topography there, these crashes seem to be created by the periglacial action.

## 3 Climates

No climatic records in the Mt. Sôgadake region is available at present. However, if we estimate the temperature conditions on this mountain by calculating based on the lapse rate of temperature, *i.e.*,  $-0.58^{\circ}\text{C}/100\text{m}$  (ICHIKAWA, 1976), in the mountain areas of the eastern part of Toyama Prefecture, probable mean temperatures are assumed to be  $15.1^{\circ}\text{C}$  in August and  $-9.2^{\circ}\text{C}$  in February, and the lowest temperature in the winter season would be approximately  $-18.0^{\circ}\text{C}$ . Betsumatadan, a tributary stream of the River Katakai, runs in the direction of southwest, reaching the Hotokegadaira, and strong winter wind from the Japan Sea blows up along the valley, and thus this valley acts as a corridor of strong seasonal wind. As seasonal wind blows against the Hotokegadaira directly, snowfall is little in Hotokegadaira in winter and the wind-exposed side becomes "Eis-bahn", especially on the north-east slope; whereas on the opposite side of the mountain, there is much snowfall. Annual precipitation is supposed to be about 3500mm.

As stated above, it seems evident that the geographical location and topography of Mt. Sôgadake, and climatic conditions, especially during the winter, are responsible for the developement of unique vegetation on Mt. Sôgadake.

### The outline of vegetation

The more or less belt-like arrangements of vegetation are also found on Mt. Sôgadake depending upon different altitudes, just as seen on the other mountains of sufficient height in Toyama Prefecture. However, as mentioned previously, Mt. Sôgadake attains only 1885m above sea level in altitude, and there thus lacks a typical alpine vegetation.

As illustrated in Fig. 2, the region up to 300 m above sea level belongs to *Camellietea japonicae*, but nowadays there develop only various secondary forests and substitution communities, excepting sporadic occurrences of *Quercus salicina* forests. The areas from 300 m to 1600 m can be referred to the *Fagetea crenatae* region, but because of the steep topography and poor developement of soils, typical *Fagus crenata*-

*Sasa kurilensis* communities do not develop there. Poorly developed beech forests attaining ca. 10m in height on the steep slope usually accompany *Camellia rusticana*, a representative so-called Japan Sea Elements,\* on the forest floor.

The areas at 1600m above sea level or higher altitude, where are exposed to strong seasonal wind during the winter, belong to the *Vaccinio-Piceetea* region, and there the mass elevation effect is remarkable. On the wind-exposed slope, there develops wind-exposed vegetation; but on the opposite side of the mountain there develops a typical snow-patch vegetation. Wind-exposed vegetation consists of exceedingly dwarfish beech trees attaining only about 1 – 2 m in height and also of various members normally associated with the beech communities. Among the snow patch vegetations, there are found several representative alpine-arctic elements such as *Plantago hakusanensis*, *Phyllodoce aleutica*, *Geum pentapetalum*, etc. Only on the ridges near the summit of the mountain, there develop patchy communities of extremely dwarf *Abies mariesii*.

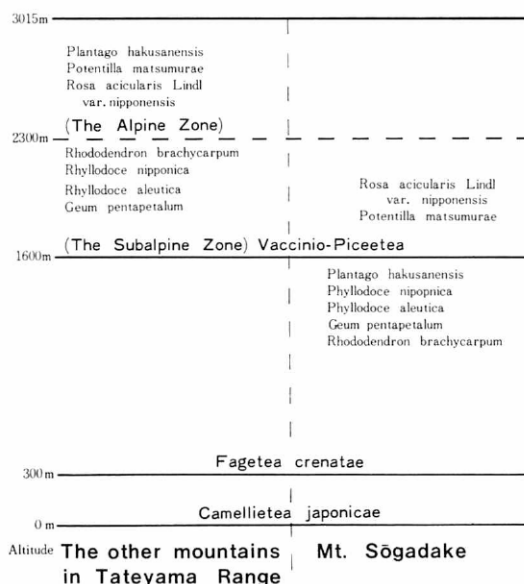


Fig. 2. Vertical distribution of vegetations in Mt. Sôgadake and the other mountains in the Tateyama Mountain-Range

### 1 The Zone of Evergreen Warm-Temperate Vegetation (Altitude: 0 – 300m)

The foothills near Unazuki-Spa, located at the foot of Mt. Sôgadake, are at present mainly covered by secondary forests of *Quercus serrata*, and plantations of *Cryptomeria japonica*. Also, in the clearings or on the road sides, there often develop the communities of *Miscanthus sinensis*. In the areas without human disturbance, however, there can be seen the communities of *Zelkova serrata*, *Quercus salicina* and rarely of *Tsuga sieboldii*.

### 2 The Zone of Deciduous Cool-Temperate Vegetation (Altitude: 300 – 1600m)

On the steep slopes from 300m to 1600m above sea level, there was once a typical

\*Species distributed exclusively in the area region facing the Sea of Japan are called "Japan Sea Elements"

*Fagus crenata* forest, but at present one can see the secondary forests chiefly consisting of *Acer palmatum* var. *matsumurae*, *Acer sieboldianum*, *Acer mono*, etc. However, in the wet sites along the valleys, e. g., the Unazuki-Ononumadan (alt. 300m) and the River Fuse (alt. 400m), there develop the forests of *Aesculus turbinata*. On the mountain slopes from 600m to 1200m in altitude, *Fagus crenata* forests accompanying with *Camellia rusticana* in the underlayer are found.

It is very interesting to note here that on the mountain slopes, there occur a number of so-called "Japan Sea Elements", such as *Camellia rusticana*, *Ilex crenata* var. *paludosa*, *Ilex leucolada*, *Aucuba japonica*, *Lindera citriodora* var. *membranacea*, *Hamamelis japonica* var. *obtusata*, *Sasa kurilensis*, *Shortia soldanelloides* var. *magna*, *Ilex sugerokii* var. *brevipedunculata*, *Rhododendron trinerve*, *Glaucidium palmatum*, *Arnica mallotopus*, *Mitella koshiensis*, *Potentilla togasii*, and *Carex stenostachys* var. *ikegamiana*.

There is an outcrop of limestone at the altitude of 600m of Katakai River course. A number of interesting species such as *Camprosorius sibiricus*, *Pontentiella dickinsii*, *Tofieldia coccinea* var. *kondoi*, *Lilium leichtlinii* forma *tenuiformium* and *Smilax vaginata* var. *stans* are found there. Another outcrop of limestone occurs at the altitude of 1300m of Unazuki course, and the communities developed there contain many rare species such as *Mecodium wrightii*, *Camptosorus sibiricus*, *Lastrea robertiana* var. *longula*, *Asplenium varians*, *Asplenium capillipes*, *Loxogramme grammitoides*, *Tofieldia coccinea* var. *kondoi*, *Saxifraga fortunei* var. *alpina* (Urabeni-daimonjiso), and *Balanophora nipponica*.

The community of *Thuja standishii* occurs on the ridge at about 1400m above sea level, where the following plants are found: *Thuja standishii*, *Ilex sugerokii* var. *brevipedunculata*, *Pinus parviflora* var. *pentaphylla*, *Cryptomeria japonica* var. *radicans*, *Tsuga diversifolia*, *Rhododendron metternichii* var. *roseum*, and *R. brachycarpum*.

A similar community occurs at the altitude of approximately 700m of Katakai River course, although *Pinus parviflora* var. *pentaphylla*, *Tsuga diversifolia* and *Rhododendron brachycarpum* are not found there.

A remarkable snow patch vegetation is found at the altitude of ca. 1500m of Unazuki course, which consists of mainly *Plantago hakusanensis* accompanied by *Shortia soldanelloides*, *Geum pentaptalum*, and *Phyllodoce nipponica*.

### 3 The Subalpine Zone (Altitude: 1600m – 2002m)

*Abies mariesii* grows at ca. 1250m above sea level, but because of strong cold seasonal wind from the Sea of Japan, only a small community develops on the ridge. No branches are found on the southwest side of the trees exposed to strong cold seasonal wind, but develop on the opposite side. Thus, the tree shape becomes triangular flag-like.

In Gozen and Hotokegadaira, strong seasonal wind blows very frequently from the Sea of Japan, and thus wind-exposed vegetation develops well, especially on the southwest slope. On the exposed sites, there is little snowfalls and "Eis-bahn" develops and the snow becomes deeper as further near the ridge. The snowfalls may attain two meters deep at the deepest point. Strong wind exposed sites are bare ground or covered with the peat layer. In the drier sites of the slope, *Carex oxyandra*, *Vaccinium vitis-idaea*, and *Deschampsia flexuosa* grow; whereas in mesic sites there occur *Lastrea phegopteris*, *Euphrasia insignis*, *Filipendula multijunga*, *Potentilla matsumurae* and *Sanguisorba tenuifolia* var. *purpurea*, *Parnassia palustris*, *Scabiosa japonica* var. *alpina*, *Orchis joo-iokiana*, and *Microstylis monophyllos*.

From the middle part of wind-exposed grasslands to the ridge, there develops a peculiar vegetation with the structure of typical hedge-shaped dwarf scrubs (plate 2), which is a representative physiognomy of wind exposed vegetation developed on high mountains on the Japan Sea side of Honshû (e. g., Mt. Gassan) (SUZUKI, 1955). The hedge-shaped structures are 0.3–1 m in width, 1–20 m in length, and 0.2–2 m in height. However, in places near the ridge, these dwarf scrubs form dense thickets. Main constituent species of the hedge-shaped vegetation are *Tripetaleia bracteata*, *Acer tschonoskii*, *Corylus sieboldiana*, *Rosa acicularis* var. *nipponensis*, and *Taxus cuspidata* var. *nana*.

On the slopes under lee of the ridge, large snow patches remain until the summer, and there develops typical "snow patch vegetation". Concentric circle-shaped vegetations develop around the snow patches. Corresponding to snow-melts, the following vegetations develop around the snow patches: the communities of *Alnus matsumurae*-*Smilacina hondoensis*, *Rubus vernus*-*Polystichum microchlamys*, *Athyrium alpestre*-*Glycera alnastertum*. The other species associated with snow patch vegetations are as follows: *Plantago hakusanensis*, *Geum pentapetalum*, *Phyllodoce nipponica*, *Shortia soldanelloides* forma *alpina*, *Primula cuneifolia* var. *hakusanensis*, *Primula jesoana*, *Fauria crista-galli*, *Saxifraga fortunei* var. *alpina*, *Viola verecunda* var. *fibrillosa*, *Parnassia alpicola*. Snow patch vegetations at the altitude of 1500 m are the lowest record in the Japan Alps. At the altitude of 1800 m, there occur three small alpine ponds called "Gaki-no-tanbo". In one of the ponds, *Sparganium gramineum* and *Scirpus hondoensis* are seen, and *Fauria cristagalli* grows at the marginal parts of these ponds.

There is no trail connecting between Mt. Sôgadake and Mt. Maekoma, and the narrow ridge ranges ca. 2.5 km from north-west to south-east. Wind exposed vegetation develops on the south-facing slope of the ridge, the Katakai valley; while on the other side of the ridge, i. e., the north-facing slope—the Kurobe valley, there develop the communities of subalpine scrubs. Hedge-shaped structures are not found in the wind-exposed vegetation here. The dominants here are *Acer tschonoskii*, *Tripetaleia bracteata*, *Sasa kurilensis* and *Sasa cernua*. In the shrubby communities developed on the north-facing slope, *Acer*

*tschonoskii*, *Sorbus commixata*, *Clethra barbinervis*, *Ilex sugerokii* var. *brevipedunculata* and *Rhododendron brachycarum* are found.

There is a scree near the peak of Mt. Maekoma. This is the only place where the following species grow in the areas surveyed: *Hedysarm viciodes*, *Geum caltheefolium* var. *nipponicum*, *Libanotis coreana* var. *alpina*, *Veronica schmidtiana* var. *bandaiana*, *Adenophora nikoensis* and *Erigeron thumbergii*.

#### 4 Notable Species in Distribution

##### 1) Species found only on Mt. Sôgadake in Toyama Prefecture

###### 1 *Asplenium capillipes* Makino (ASPLENIACEAE)

Habitat: On limestone outcrops of Unazuki (rare).

Distribution: limestone-areas from Hokkaidô to Kyûshû.

###### 2 *Carex folisissima* Fr. Schm. var. *latissima* Akiyama (CRYPERACEAE)

Habitat: Unazuki course (alt. 1600 m).

Distribution: From Hokkaidô to Kyûshû.

###### 3 *Orchis joo-iokiana* Makino (ORCHIDACEAE)

On Mt. Sôgadake, this species flowers in the middle of July.

Habitat: Hotokegadaira.

Distribution: Subalpine areas in Central Honshû.

###### 4 *Microstylis monophyllos* Lindl. (ORCHIDACEAE)

Habitat: On August 1, 1959, Nagai discovered this species at Hotokegadaira, but no other person has found it since then.

Distribution: Subalpine areas of Hokkaidô, Honshû and Shikoku.

###### 5 *Potantilla dickinsii* Franch. et Savat. (ROSACEAE)

Habitat: Found on the rocky cliff at the point of 600 m in altitude of the Katakaigawa course by Ohta.

Distribution: From Hokkaidô to Kyûshû.

###### 6 *Lonicera ramosissima* Franch. et Savat. (CAPRIFOLIACEAE)

Habitat: On Aug. 5, 1960, this species was first found by Ohta at the point of 700 m in altitude of the Katakaigawa course. But unfortunately the only colony of this species has become extinct by the artificial disturbance.

Distribution: Alpine areas of Central Honshû.

###### 7 *Saxifraga fortunei* Hook. f. var. (SAXFRAGACEAE)

This undescribed plant has smaller leaves and thinner petioles than those of typical "Daimonjiso" i. e., *Saxifraga fortunei* var. *fortunei*. and is characterized by its red petioles and red leaves beneath in colour. Flowering period is earlier than "Daimonjiso" and in August.

Habitat: Mt. Sôgadake, Unazuki course (alt. 1400 m).

Distribution: Mannami, Gifu Pref., and Maikomidaira, Itoigawa City, Niigata Pref.

2) Rare Species in Toyama Prefecture

1 *Dryopteris chinensis* Koiz. (ASPIDIACEAE)

Habitat: Unazuki.

Distribution: Hokkaidô, Honshû, Shikoku, and Kyûshû.

Distribution in Toyama Prefecture: Ogawa of Asahi-machi and Unazuki.

2 *Lastrea robertiana* Newm. var. *longula* Ohwi (ASPIDIACEAE)

Habitat: Unazuki, the lowest habitat in altitude in Toyama Pref.

Distribution: In the coniferous forest of Hokkaidô and Northern Honshû.

Distribution in Toyama Prefecture: Mt. Yukikura, Lake Kurobeko (Tairanokoya), Bijodaira and present habitats.

3 *Lastrea robertiana* Newm. var. *longula* Ohwi (ASPIDIACEAE)

Habitat: Mt. Sôgadake (alt. 1400m of Unazuki course).

Distribution: In the coniferous forests of Hokkaidô, Kantô and Chûbu Districts of Honshû, and Shikoku.

Distribution in Toyama Prefecture: Higashi-Kanetsuri-yama of Kurobe valley and the present habitats.

4 *Pleopeltis ussuriensis* Regel et Mack var. *distans* Okuyama (POLYPODIACEAE)

Habitat: On the rocks and trunks of beech trees on Mt. Sôgadake.

Distribution: On the rocks and trees in the mountains from Hokkaidô to Kyûshû.

Distribution in Toyama Prefecture: Mt. Eburi, Kitamatadan, Bunazaka of Midagahara, Mt. Ningyô-yama, Arimine, and the present habitats.

5 *Taxus cuspidata* Sieb. et Zucc. var. *nana*. Rehd. (TAXACEAE)

Habitat: Wind-exposed sites on Mt. Sôgadake and Mt. Maekoma.

Distribution: Subalpine areas of the Japan Sea side of Honshû.

Distribution in Toyama Prefecture: Mt. Shirakimine, Mt. Kongôdôzan, Mt. Komagadake and area of Mt. Sôgadake.

6 *Tofieldia coccoinea* Richards. (LILIACEAE).

Habitat: The east slope of Mt. Sôgadake (alt. 1800m).

Distribution: On the rocks on high mountains of Hokkaidô, Central to northern Honshû.

Distribution in Toyama Prefecture: Mt. Suishô, Mt. Shirouma, Mt. Yukikura, Mt. Shôzu, and the present habitats.

7 *Smilax vaginata* Decne. var. *stans* T.Koyama (LILIACEAE)

Habitat: Katakaigawa course (alt. 600m).

Distribution: A rare species. Honshû, Shikoku, and Kyûshû.

Distribution in Toyama Prefecture: Mt. Higashi-Kanetsuriyama of Kurobe valley and the present habitats.

8 *Goodyera macrantha* Maxim. (ORCHIDACEAE)

Slightly ascending stems are about 5 to 6cm in length; two or three big pale-

brown flowers bloom in summer.

Habitat: Unazuki, the northmost record of Japan Sea side, found preliminarily by SHÔJI.

Distribution: Western Honshû, Shikoku, and Kyûshû.

Distribution in Toyama Prefecture: Ômaki of the River Shô and the present habitats.

9 *Myrmecis japonica* Rolfe (ORCHIDACEAE)

Habitat: *Abies mariesii* forests of Mt. Sôgadake, found by Hayashi.

Distribution: Hokkaidô, and Northern and Central Honshû.

Distribution in Toyama Prefecture: Between Arimine and Tarobê-daira, and the present habitats.

10 *Balanophora nipponica* Makino (BALANOPHORACEAE)

Habitat: The beech zone on Mt. Sôgadake. Discovered by Shôji on Sep. 30, 1959.

Distribution: Northern and Central Japan.

Distribution in Toyama Prefecture: Bambajima of Kami'ichi-machi, and the present habitats.

11 *Lychnis gracillima* Makino (BALANOPHORACEAE)

Habitat: Mt. Sôgadake.

Distribution: Subalpine areas of North and Central Japan.

Distribution in Toyama Prefecture: Mt. Fuki, Mt. Zaratôge, and present habitats.

12 *Parnassa alpicola* Makino (SAXIFRACEAE)

Habitat: Mt. Sôgadake (alt. 1750m).

Distribution: A rare species. Alpine areas of Northern and Central Japan.

Distribution in Toyama Prefecture: Mt. Yukikura, Mt. Shirouma, Mt. Asahi, and the present habitats.

13 *Libanotis coreana* Kitag. var. *alpina* Kitag.

Habitat: Mt. Maekoma found by Nagai.

Distribution: Alpine areas of Chubu District of Honshû.

Distribution in Toyama Prefecture: Mt. Yukikura and the present habitats.

14 *Primula jesoana* Miq. (PRIMULACEAE)

Habitat: Mt. Sôgadake (alt. 1750m).

Distribution: The lowlands of South-western Hokkaidô, and the mountains in North and Central Honshû.

15 *Saussurea sagitta* Franch. (COMPOSITAE)

Habitat: Found at Mt. Maekoma by Nagai.

Distribution: Alpine areas of Northern Honshû.

Distribution in Toyama Prefecture: Mt. Shirouma, Mt. Harinoki and the present habitats.



3) The highest record of altitude in Japan

1 *Camellia rusticana* Honda (THEACEAE)

Habitats: Mt. Sôgadake (abundantly grows up to alt. 1200 m, but from 1200 m to 1600m, only sparsely occurs), an important constituent species of *Fagus crenata*-*Camellia rusticana* community.

2 *Heterotropa yoshikawai* F.Maekawa \*(ARISTOCOCHIACEAE)

This species grows bigger than *Heterotropa takaoi* ("Hime-kan'aoi"). Corolla is 2.5 cm in length and 1cm in width. There is a constriction at the perianth lobe, with a narrow throat.

Habitats: From Awadera of Kurobe City (alt. 95m) to Mt. Sôgadake (alt. 1350m).

Distribution: From the left shore of the River Seki, Jôetsu City, Niigata Pref. to Matsukura, Uozu City, Toyama Pref. (NAGAI, 1964. YOSHIKAWA, 1976.)

### A List of Vascular Plants

#### 1 Date of survey

Aug. 1-4, 1959

Aug. 1-3, 1965

May 30, 1968

Aug. 31, 1970

July 22-23, 1972

#### 2 Area studied

The areas studied in the present study are following five courses: (1) Unazuki course, between the alt. 190m of Unazuki and the peak of Mt. Sôgadake; (2) Fusegawa course, between the alt. 220m of Fukuhira and the peak of Mt. Sôgadake, (3) Katakaigawa course, between the contact point Higashi-mata-dan and Minami-mata-dan (alt. 437m), and the peak of Mt. Sôgadake, (4) Katakaigawa Betsumatadan, from the point of alt. 300 m to 1200 m, and (5) the ridge between Mt. Sôgadake and Mt. Komagadake.

#### 3 Description of Science Name

Science name of the present list mainly depends on "New edition revised and enlarged Flora of Japan" (OHWI, 1978) but partly on the "Keys to Herbaceous Plants of Japan" (SUGIMOTO, 1972) and other publications (OKUYAMA, 1977).

#### 4 Description of locality

Rare species on Mt. Sogadake and species with disjunct distributions in Toyama Prefecture are described the locality or course name, which are described head by the

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\*Undescribed species

next abbreviation (Co.U...Unazuki course, Co.Fu...Fusegawa course, Co.K....Katakaigawa course, U....Unazuki, F....Fukuhira, S.....Sanga,). But the common species or the species found at every course are described only altitude and localities are abbreviated.

## 5 Number of plants confirmed in the present study

Natural classification of plants	Familia	Genus	Species	Varieties	Forma	Hybrid	Total
Pteridophyta	13	31	73	15	3	0	91
Spermatophyta	114	423	679	165	25	1	870
Gymnospermae	5	9	6	6	0	0	12
Angiospermae	109	414	673	159	25	1	858
Monocotyledoneae	13	102	186	36	2	1	225
Dicotyledoneae	96	312	487	123	23	0	633
Choripetalae	66	193	315	67	15	0	397
Gamopetalae	30	119	172	56	8	0	236
Total	127	454	752	180	28	1	961

## DIVISIO PTERIDOPHYTA

### EQUISETACEAE

*Equisetum arvense* Linn.

Sugina

### LYCOPODIACEAE

*Lycopodium serratum* Thunb.

    var. *serratum* Linn.

*L. obscurum* Linn.

    forma *strictum* D. C. Eaton

    forma *flabellatum* Takeda

*L. clavatum* Linn. var. *nipponicum* Nakai

    var. *robustius* Nakai (1200m ~ 1600m)

Tôgeshiba

Hosoba-tôgeshiba

Mannen-sugi

Tachi-mannensugi

Uchiwa-mannensugi

Hikageno-kazura

Ezo-hikagenokazura

### SELAGINELLACEAE

*Selaginella shakotanensis* Miyabe et Kudo (U. 200m)

*S. tamariscina* Spring

*S. remotifolia* Spring var. *japonica* Koidz.

*S. nipponica* Franch. et Savat.

*S. helvetica* Linn. (U. 200m)

Himo-kazura

Iwahiba

Kurama-goke

Tachi-kuramagoke

Ezono-himekuramagoke

**OPHIOGLOSSACEAE**

<i>Botrychium ternatum</i> Swartz	Fuyuno-hanawarabi
<i>B. japonicum</i> Underw.	Oo-hanawarabi
<i>B. strictum</i> Underw.	Nagabono-hanawarabi

**OSMUNDACEAE**

<i>Osmunda japonica</i> Thunb.	Zenmai
<i>O. asiatica</i> Ohwi	Yamadori-zenmai

**HYMENOPHYLLACEAE**

<i>Mecodium wrightii</i> Copel. (Co. U. 1300m)	Koke-shinobu
<i>M. polyanthos</i> Copel. (Co. U. 1300m)	Hosoba-kokeshinobu
<i>Hymenophyllum barbatum</i> Miq. (Co. U. 1300m)	Kôya-kokeshinobu
<i>Crepidomanes latealatum</i> Copel. (Co. U. 1300m)	Ao-horagoke

**PTERIDACEAE**

<i>Dennstaedtia wilfordii</i> Koidz.	Ôren-shida
<i>D. hirsuta</i> Mett.	Inu-shida
<i>Pteridium aquilinum</i> Kuhn var. <i>latiusculum</i> Underw.	Warabi
<i>Pteris cretica</i> Linn. (U. F. S.)	Oobano-inomotosô
<i>Coniogramme fraxinea</i> Diels var. <i>intermedia</i> C. Chr.	Iwagane-zenmai
<i>C. japonica</i> Diels	Iwaganesô
<i>C. intermedia</i> Hieron. forma <i>villosa</i> Kurata	Urage-iwagane
<i>Adiantum pedatum</i> Linn.	Kuzyaku-shida

**DAVALLIACEAE**

<i>Davallia mariesii</i> Moore	Shinobu
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**PLAGIOGYRIACEAE**

<i>Plagiogyria matsumureana</i> Makino	Yama-sotetsu
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**ASPIDIACEAE**

<i>Matteuccia orientalis</i> Trev.	Inu-gansoku
<i>M. struthiopteris</i> Todaro	Kusa-sotetsu
<i>Onoclea sensibilis</i> Linn.	Kôya-warabi
<i>Woodsia polystichoides</i> Eaton	Iwa-denda
<i>Polystichum tripterum</i> Presl	Zyûmonzi-shida
<i>P. craspedosorum</i> Diels	Tsuru-denda
<i>P. retroso-paleaceum</i> Tagawa	Sakage-inode

<i>P. polyblepharum</i> Presl	Inode
var. <i>fibrilloso-paleaceum</i> Tagawa	Aiasuka-inode
<i>P. braunii</i> Fee (Co. U. 1400m)	Hoso-inode
<i>P. microchlamys</i> Kodama	Karakusa-inode
<i>Phanerophlebia fortunei</i> Copel. var. <i>clivicola</i> Ohwi	Yama-yabusotetsu
<i>Rumohra mutica</i> Ching	Shinobu-kaguma
<i>R. standishii</i> Ching	Ryômen-shida
<i>R. miqueliana</i> Ching	Narai-shida
<i>Dryopteris austriaca</i> Woyнар, ex Schinz et Thellung	Shirane-warabi
<i>D. crassirhizoma</i> Nakai	Oshida
<i>D. uniformis</i> Makino	Okuma-warabi
<i>D. monticola</i> C. Chr.	Miyama-benishida
<i>D. sabaei</i> C. Chr.	Miyama-itachishida
<i>D. bissetiana</i> C. Chr. (U. F. S.)	Yama-itachishida
<i>D. saxifraga</i> H. Ito (Co. U. 600m)	Iwa-itachishida
var. <i>subtripinnata</i> H. Ito (U. F. S.)	Oo-itachishida
<i>D. chinensis</i> Koidz. (U. F. S.)	Misaki-kaguma
<i>Lastrea totta</i> Ohwi	Mizo-shida
<i>L. phegopteris</i> Bory (1800m ~)	Miyama-warabi
<i>L. decursive-pinnata</i> J. Smith	Gezigezi-shida
<i>L. quelpaertensis</i> Copel.	Ooba-shorima
<i>L. japonica</i> Copel.	Harigane-warabi
var. <i>musashiensis</i> Honda	Iwa-hariganewarabi
<i>L. oligohplebia</i> Copel.	Hime-warabi
<i>L. dryopteris</i> Bory (U. 200m)	Usagi-shida
<i>L. robertiana</i> Newm. var. <i>longula</i> Ohwi (U. 1300m)	Iwa-usagishida
<i>Athyrium crenuloserrulatum</i> Makino	Ippon-warabi
<i>A. pycnosorum</i> H. Chr.	Hakumô-inode
<i>A. melanolepis</i> H. Chr. (Co. U. 1600m ~)	Miyama-meshida
<i>A. yokoscense</i> H. Chr.	Hebino-negoza
var. <i>alpicola</i> Hiyama (1600m ~)	Takane-hebinonegoza
<i>A. pimitorum</i> Tagawa var. <i>koshiense</i> Kurata	Koshino-satomeshida
<i>A. niponicum</i> Hance	Inu-warabi
<i>A. vidalii</i> Nakai	Yama-inuwarabi
<i>A. wardii</i> Makino	Hirohano-inuwarabi
var. <i>majus</i> Makino	Karakusa-inuwarabi
<i>A. squamigerum</i> Ohwi	Kiyotaki-shida

**BLECHNACEAE**

<i>Blechnum amabile</i> Makino	Osa-shida
<i>B. niponicum</i> Makino	Shishigashira
<i>B. castaneum</i> Makino (Co. U. 1300m)	Miyama-shishigashira

**ASPLENIACEAE**

<i>Asplenium incisum</i> Thunb.	Toranoo-shida
<i>A. varians</i> Hook. et Grev. (Co. U. 1300m)	Iwa-toranoo
<i>A. capillipes</i> Makino (Co. U. 1400m)	Hime-iwatoranoo
<i>A. scolopendrium</i> Linn.	Ko-taniwatari
<i>Camptosorus sibiricus</i> Rupr. (Co. K. 600m, Co. U. 1300m)	Kumonosu-shida

**POLYPODIACEAE**

<i>Pleopeltis thunbergiana</i> Kaulf.	Noki-shinobu
<i>P. ussuriensis</i> Regel et Maack var. <i>distans</i> Okuyama	Miyama-nokishinobu
<i>P. annuifrons</i> Nakai	Hotei-shida
<i>Lepisorus thunbergianus</i> var. <i>angustus</i> Kurata	Onaga-nokishinobu
<i>Crypsinus veitchii</i> Copel. (Co. U. 800m)	Miyama-uraboshi
<i>C. hastatus</i> Copel. (U. 200m)	Mitsude-uraboshi
<i>Loxogramme grammitoides</i> C. Chr. (Co. U. 1300m)	Hime-saziran

**DIVISO SPERMATOPHYTA**

**GYMNOSPERMAE**

**TAXACEAE**

<i>Torreya nucifera</i> Sieb. et Zucc. var. <i>radicans</i> Nakai	Chabo-gaya
<i>Taxus cuspidata</i> Sieb. et Zucc. var. <i>nana</i> Rehd. (1780 m ~ 1900m)	Kyaraboku

**CEPHALOTAXACEAE**

<i>Cephalotaxus harringtonia</i> K. Koch var. <i>nana</i> Rehder	Hai-inugaya
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**PINACEAE**

<i>Abies mariesii</i> Masters (Co. U. 1250m ~)	Aomori-todomatsu
<i>Tsuga sieboldii</i> Carr. (U. 300m)	Tsuga
<i>T. diversifolia</i> Masters (Co. U. 1400m)	Kome-tsuga
<i>Picea jezoensis</i> Carr. var. <i>hondoensis</i> Rehder (Co. U. 1600m)	Tohi
<i>Pinus densiflora</i> Sieb. et Zucc. (~400m)	Aka-matsu

<i>P. parviflora</i> Sieb. et Zucc. var. <i>pentaphylla</i> Henry (Co. U. 1500m)	Kita-goyô
<i>P. hakkodensis</i> Makino (1800m)	Hakkoda-goyô

#### TAXODIACEAE

<i>Cryptomeria japonica</i> D. Don var. <i>radicans</i> Nakai (~1760m)	Ashiu-sugi
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#### CUPRESSACEAE

<i>Thuja standishii</i> Carr. (Co. K. 700m, Co. U. 1400m)	Kurobe
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#### ANGIOSPERMAE

#### MONOCOTYLEDONEAE

#### SPARGANIACEAE

<i>Sparganium gramineum</i> Georgi (Co. K. 1780m)	Uki-mikuri
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#### ALISMATACEAE

<i>Alisma canaliculatum</i> A. Br. et Bouché (U. F.)	Hera-omodaka
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#### GRAMINEAE

<i>Sasa senanensis</i> Rehd. (Mt. Maekoma)	Kumai-zasa
<i>S. palmata</i> Nakai	Chimaki-zasa
<i>S. cernua</i> Makino	Okuyama-zasa
<i>S. kurilensis</i> Makino	Chishima-zasa
var. <i>uchidae</i> Makino	Nagaba-negamaritake
<i>Alopecurus aequalis</i> Sobol. var. <i>amurensis</i> Ohwi	Suzumeno-teppô
<i>Agrostis alba</i> Linn.	Konuka-gusa
<i>A. flaccida</i> Hack. (Mt. Maekoma)	Miyama-nukabo
<i>A. borealis</i> Hartm.	Ko-miyamanukabo
<i>A. clavata</i> Trin.	Yama-nukabo
<i>Calamagrostis pseudo-phragmites</i> Koeler	Hossu-gaya
<i>C. langsdorffii</i> Trin. (Co. U. 1700m)	Iwa-nogariyasu
<i>C. hakonensis</i> Franch. et Savat.	Hime-nogariyasu
<i>C. longiseta</i> Hack. (Hotokegadaira)	Hige-nogariyasu
<i>Deschampsia flexuosa</i> Trin.	Kome-susuki
<i>Milium effusum</i> Linn. (Co. U. 1500m)	Ibuki-nukabo
<i>Phalaris arundinacea</i> Linn. (U. F.)	Kusa-yoshi
<i>Brachypodium sylvaticum</i> P. Beauv. (U. F.)	Yama-kamozigusa

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Agropyron tsukushiense Ohwi var. transiens Ohwi	Kamozi-gusa
A. ciliare Franch. var. pilosum Honda (U.)	Tachi-kamozi
Bromus pauciflorus Hack.	Kitsune-gaya
B. japonicus Thunb.	Suzumeno-chahiki
Festuca rubra Linn var. rubra	Oo-ushinokegusa
F. parvigluma Steud.	Toboshigara
F. arundinacea Schreb.	Oni-ushinokegusa
F. extremiorientalis Ohwi (U.)	Oo-toboshigara
F. myuros Linn. (U.F.S.)	Naginata-gaya
Poa annua Linn. (U. F. S.)	Suzumeno-katabira
P. sphondylodes Trin. (U. F. S.)	Ichigo-tsunagi
Glyceria alnasteretum Komar. (1200m ~)	Miyama-dozyôtsunagi
Melica nutans Linn.	Kome-gaya
Phragmites communis Trin.	Yoshi
Moliniopsis japonica Hayata (1500m ~)	Numa-gaya
Eragrostis curvula Nees (U.)	Shinadare-suzumegaya
E. ferruginea Beauv. (U. F. S.)	Kaze-kusa
E. multicaulis Steud. (U. F. S.)	Niwa-hokori
Eleusine indica Gaertn. (U. F. S.)	Ohi-shiba
Cynodon dactylon Pers. (U. F. S.)	Gyôgi-shiba
Muhlenbargia japonica Steud. (U. F. S.)	Nezumi-gaya
M. curviaristata Ohwi (700m)	Koshino-nezumigaya
Arundinella hirta C. Tanaka	Toda-shiba
Pennisetum alopecuroides Spreng.	Chikara-shiba
Setaria viridis Beauv.	Enokoro-gusa
S. faberi Herrm.	Akino-enokorogusa
S. glauca Beauv.	Kin-enokoro
Panicum bisulcatum Thunb. (U. F. S.)	Nukakibi
Digitaria adscendens Henr. (U. F. S.)	Mehi-shiba
D. violascens Link (U. F. S.)	Aki-mehishiba
Paspalum thunbergii Kunth (U. F. S.)	Suzumeno-hie
Oplismenus undulatifolius Roemer et Schultes var. japonicus Koidz. (U. F. S.)	Chizimi-zasa
Echinochloa crus-galli Beauv. var. oryzicola Ohwi (U. F. S.)	Ta-inubie
Isachne globosa O. Kuntze (U. F. S.)	Chigo-zasa
Imperata cylindrica Beauv. var. koenigii Durand et Schinz (U. F. S.)	Chigaya
Miscanthus sinensis Anderss.	Susuki
M. oligostachyus Stapf (~1800m)	Kariyasu-modoki

<i>M. tinctorius</i> Hack. (~1800m)	Kariyasu
<i>Spodipogon depauperatus</i> Hack.	Miyama-aburasusuki
<i>Microstegium nudum</i> A. Camus	Miyama-sasagaya
<i>M. japonicum</i> Kodz. (U. F. S.)	Sasa-gaya
<i>M. vimineum</i> A. Camus var. <i>polystachyum</i> Ohwi (U. F. S.)	Ashiboso
<i>Arthraxon hispidus</i> Makino (U. F. S.)	Kobuna-gusa
<i>Hemerthria sibirica</i> Ohwi (U. F. S.)	Ushino-shippei

### CYPERACEAE

<i>Cyperus brevifolius</i> Hassk. var. <i>leiolepis</i> T. Koyama (U. F. S.)	Hime-kugu
<i>C. polystachyos</i> Rottb. (U. F. S.)	Iga-gayatsuri
<i>C. globosus</i> All. (U. F.)	Aze-gayatsuri
<i>C. orthostachyus</i> Franch. et Savat. (U.F.)	Ushi-kugu
<i>C. iria</i> Linn. (U. F. S.)	Kogome-gayatsuri
<i>C. microiria</i> Steud. (U. F. S.)	Kayatsuri-gusa
<i>C. amuricus</i> Maxim. (U. F. S.)	Cha-gayatsuri
<i>C. nipponicus</i> Franch. et Savat. (U. F. S.)	Ao-gayatsuri
<i>Lipocarpa microcephala</i> Kunth (U. F. S.)	Hingi-gayatsuri
<i>Scirpus wichurae</i> Böcklr. (U. F.)	Abura-gaya
<i>S. hondoensis</i> Ohwi	Miyama-hotarui
<i>Fimbristylis miliacea</i> Vahl (U. F. S.)	Hideriko
<i>F. subbispicata</i> Nees et Meyen (U. F. S.)	Yama-i
<i>F. dichotoma</i> Vahl (U. F. S.)	Ten-tsuki
<i>F. squarrosa</i> Vahl (U. F. S.)	Aze-tentsuki
<i>F. aestivalis</i> Vahl (U. F. S.)	Ko-azetentsuki
<i>Eleocharis acicularis</i> Roem. et Schult. var. <i>longiseta</i> Svenson (U. F.)	Matsuba-i
<i>Carex albata</i> Boott (Co. U. 1200m ~ 1700m)	Minoboro-suge
<i>C. omiana</i> Franch. et Savat. (Co. U. 1500m)	Yachi-kawazusuge
<i>C. shimidzensis</i> Franch.	Azuma-naruko
<i>C. incisa</i> Boott (U. F.)	Kawara-suge
<i>C. aphyllopus</i> Kükenth. (1780m ~)	Tateyama-suge
<i>C. maximowiczii</i> Miq. (U. F.)	Gôso
<i>C. dimorpholepis</i> Steud. (U. F.)	Aze-naruko
<i>C. kiotensis</i> Franch. et Savat. (U. F. S.)	Tekiri-suge
<i>C. doenitzii</i> Böcklr. (1300m)	Ko-tanukiran
<i>C. podogyna</i> Franch. et Savat.	Tanuki-ran
<i>C. pyrenaica</i> Wahlenb. (Co. U. 1760m)	Kin-suge



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<i>C. hakkodensis</i> Franch. (Co. U. 1760m)	Ito-kinsuge
<i>C. blepharicarpa</i> Franch.	Shôzyô-suge
var. <i>stenocarpa</i> Ohwi (Co. K. 600m)	Tsukuba-suge
<i>C. breviculmis</i> R. Br.	Ao-suge
<i>C. jacens</i> C. B. Clarke	Hagakure-suge
<i>C. stenostachys</i> Franch. et Savat. var. <i>ikegamiana</i> T. Koyama	Koshino-honmonzisuge
<i>C. dolichostachya</i> Hayata var. <i>glaberrima</i> T. Koyama	Miyama-kansuge
<i>C. conica</i> Boott	Hime-kansuge
<i>C. morrowii</i> Boott var. <i>temnolepis</i> Ohwi	Hosoba-kansuge
<i>C. foliosissima</i> Fr. Schm.	Okuno-kansuge
var. <i>latissima</i> Akiyama (Co. U. 1600m)	Hababiro-suge
<i>C. oxyandra</i> Kudo (Hotokegadaira)	Hime-suge
<i>C. parciflora</i> Boott var. <i>vaniotii</i> Ohwi (Hotokegadaira)	Nagabono-kozyuzusuge
<i>C. siderosticta</i> Hance	Tagane-sô
<i>C. ischnostachya</i> Steud.	Zyuzu-suge
<i>C. japonica</i> Thunb.	Higo-kusa
<i>C. aphanolepis</i> Fr. et Sav.	Enashi-higokusa
<i>C. mollicula</i> Boott	Hime-shirasuge
<i>C. olivacea</i> Boott var. <i>angustior</i> Kükenth. (U. F. S.)	Miyama-shirasuge

ARACEAE

<i>Arisaema urashima</i> Hara (Co. Fu. 300m)	Urashima-sô
<i>A. robustum</i> Nakai	Hiroha-tennanshō
<i>A. ovale</i> Nakai	Ashiu-tennanshō
<i>A. takedae</i> Makino	Oo-mamushigusa
<i>A. japonicum</i> Blume	Mamushi-gusa
<i>Lysichitum camtschaticum</i> Schott (Co. K. 1200m)	Mizu-bashō
<i>Symplocarpus renifolius</i> Schott, ex Miq., (Co. Fu. 600m)	Zazen-sô

LEMNACEAE

<i>Spirodela polyrhiza</i> Schleid. (U. F.)	Uki-kusa
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COMMELINACEAE

<i>Commelina communis</i> Linn. (U. F.)	Tsuyu-kusa
<i>Aneilema keisak</i> Hassk. (F.)	Ibo-kusa

JUNCACEAE

<i>Luzula plumosa</i> E. Meyer var. <i>macrocarpa</i> Ohwi	Nukaboshi-sô
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<i>L. rostrata</i> Buchen. (Mt. Maekoma)	Miyama-nukaboshisô
<i>L. multiflora</i> Lejeune (Co. U. 1200m)	Yama-suzumenohie
<i>L. pallescens</i> Bess. (Co. U. 1400m)	Oka-suzumenohie
<i>Juncus tenuis</i> Willd. (U. F. S.)	Kusa-i
<i>J. effusus</i> Linn. var. <i>decipiens</i> Buchen. (U. F.)	I
<i>J. filiformis</i> Linn. (1600m ~)	Ezo-hosoi
<i>J. setchuensis</i> Buchen. var. <i>effusoides</i> Buchen.	Hoso-i
<i>J. papillosus</i> Franch. et Savat. (U. F.)	Ao-kôgaizekishô
<i>J. leschenaultii</i> Gay (U. F.)	Kôgai-zekishô

### LILIACEAE

<i>Tofieldia okuboi</i> Makino	Hime-iwashôbu
<i>T. coccinea</i> Richards. (1840m)	Chishima-zekishô
var. <i>kondoi</i> Hara (1300m)	Chabo-zekishô
<i>T. japonica</i> Miq. (1600m ~ 1800m)	Iwa-shôbu
<i>Narthecium asiaticum</i> Maxim. (1600m ~)	Kinkôka
<i>Metanarthecium luteo-viride</i> Maxim.	Nogi-ran
<i>Heloniopsis orientalis</i> C. Tanaka	Shôzyôbakama
<i>Veratrum stamineum</i> Maxim. (1600m ~)	Ko-baikeisô
var. <i>lasiophyllum</i> Nakai	Urage-kobaikeisô
<i>V. grandiflorum</i> Loes. fil.	Baikei-sô
× <i>nipponicum</i> Nakai (1500m ~ 1600m)	Koshizi-baikei
<i>V. maackii</i> Regel var. <i>parviflorum</i> Hara et Mizushima	Aoyagi-sô
var. <i>japonicum</i> T. Shimizu	Shuro-sô
<i>Tricyrtis latifolia</i> Maxim. (1600m)	Tamagawa-hototogisu
<i>Hosta montana</i> F. Maekawa	Ooba-gibôshi
<i>Hemerocallis middendorffii</i> Trautv. et May. var. <i>esculenta</i>	
Ohwi (Co. U. 1400m ~ 1800m)	Zenteika
<i>Allium grayi</i> Regel	Nobiru
<i>A. schoenoprasum</i> Linn. var. <i>foliosum</i> Regel	Asatsuki
<i>Lilium cordatum</i> Koidz. var. <i>glehnii</i> Woodcock	Oo-ubayuri
<i>L. leichtlinii</i> Hook. fil. var. <i>tigrinum</i> Nichols.	Ko-oniyuri
forma <i>tenuifolium</i> Mizushima (Co. K. 600m)	Hosoba-kooniyuri
<i>L. lancifolium</i> Thunb. (U. F.)	Oni-yuri
<i>L. japonicum</i> Thunb. (U. F. S.)	Sasa-yuri
<i>Erythronium japonicum</i> Decne.	Katakuri
<i>Fritillaria japonica</i> Miq. var. <i>koidzumiana</i> Hara et Kanai (U. F.)	Koshino-kobaimo
<i>Scilla scilloides</i> Druce (U. F. S.)	Tsurubo

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<i>Polygonatum lasianthum</i> Maxim.	Miyama-narukoyuri
<i>P. odoratum</i> Druce var. <i>pluriflorum</i> Ohwi	Ama-dokoro
<i>P. macranthum</i> Koidz.	Oo-narukoyuri
<i>P. falcatum</i> A. Gray	Naruko-yuri
<i>Streptopus amplexifolius</i> DC. var. <i>papillatus</i> Ohwi	Ooba-takeshimaran
<i>S. streptopoides</i> Frye et Rigg var. <i>japonicus</i> Fassett	Takeshima-ran
<i>Clintonia udensis</i> Trautv. et Mey.	Tsubame-omoto
<i>Smilacina hondoensis</i> Ohwi	Ooba-yukizasa
<i>S. yesoensis</i> Franch. et Savat.	Hiroha-yukizasa
<i>Maianthemum dilatatum</i> Nels. et Macbr. (1300m ~)	Maizuru-sô
<i>Disporum sessile</i> Don	hôchaku-sô
<i>D. smilacinum</i> A. Gray	Chigo-yuri
var. <i>ramosum</i> Nakai	Edauchi-chigoyuri
<i>D. viridescens</i> Nakai (Co. U. 700m)	Oo-chigoyuri
<i>Paris verticillata</i> M. v. Bieb. (1600m)	Kurumaba-tsukubanesô
<i>P. tetraphylla</i> A. Gray	Tsukubane-sô
<i>P. japonica</i> Franch. (1700m)	Kinugasa-sô
<i>Trillium smallii</i> Maxim.	Enreisô
forma <i>atropurpurecarpa</i> Maxim (1500m)	Kuromi-enreisô
<i>Liriope platyphylla</i> Wang et Tang	yabu-ran
<i>Ophiopogon japonicus</i> Ker-Gawl.	Zyano-hige
<i>Aletris foliata</i> Bureau et Franch. (Co. U. 1600m)	Nebari-nogiran
<i>Smilax nipponica</i> Miq.	Tachi-shiode
<i>S. riparia</i> A. DC. var. <i>ussuriensis</i> Hara et T. Koyama	Shiode
<i>S. china</i> Linn.	Sarutori-ibara
<i>S. vaginata</i> Decne. var. <i>stans</i> T. Koyama (Co. K. 600m)	Maruba-sankirai
<i>S. sieboldii</i> Miq.	Yama-kashû

AMARYLLIDACEAE

<i>Lycoris sanguinea</i> Maxim.	Kitsuneno-kamisori
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DIOSCOREACEAE

<i>Dioscorea japonica</i> Thunb.	Yamano-imo
<i>D. tokoro</i> Makino	Oni-dokoro
<i>D. nipponica</i> Makino	Uchiwa-dokoro
<i>D. septemloba</i> Thunb.	Kikuba-dokoro

IRIDACEAE

<i>Iris gracilipes</i> A. Gray	Hime-shaga
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*I. japonica* Thunb.

Shaga

# ORCHIDACEAE

*Cypripedium japonicum* Thunb. (Hotokegadaira)

Kumagae-sô

*Orchis aristata* Fisch. (Hotokegadaira)

Hakusan-chidori

*O. joo-iokiana* Makino (1720m)

Nyohô-chidori

*O. graminifolia* Tang et wang (Co. U. 1300m)

Uchô-ran

*Gymnadenia conopsea* R. Br. (Mt. Maekoma)

Tegata-chidori

*G. camtschatica* Miyabe et Kudo

Nobine-chidori

*Coeloglossum viride* Hartm. var. *bracteatum* Richter (Co. U. 1500m)

Ao-chidori

*Tulotis ussuriensis* Hara

Tonbo-sô

*Platanthera florentii* Franch. et Savat. (Co. U. 1000m)

Zinbai-sô

*P. ophrydioides* Fr. Schm. (Hotokegadaira)

Kiso-chidori

*P. minor* Reichb. fil.

Oobano-tonbosô

*P. tipuloides* Lindl. (Hotokegadaira)

Hosobano-kisochidori

var. *nipponica* Ohwi (1600m)

Kobano-tonbosô

*Gastrodia elata* Blume (U. S.)

Onino-yagara

*Cephalathera falcata* Blume (F.)

kin-ran

*C. longibracteata* Blume (U. F. S.)

Sasaba-ginran

*Epipactis thunbergii* A. Gray (F.)

Kaki-ran

*Spiranthes sinensis* Ames (U. F. S.)

Nezibana

*Listera cordata* R. Br.

Futaba-ran

*Goodyera schlechtendaliana* Reichb. fil. (U.)

Miyama-uzura

*G. maximowicziana* Makino

Akebono-shusuran

*G. macrantha* Maxim. (U. 230m)

Beni-shusuran

*Myrmechis japonica* Rolfe (1780m)

Aridôsi-ran

*Tipularia japonica* Matsum. (F.)

Hitotsubukuro

*Ephippianthus schmidtii* Reichb. fil. (1400m)

Ko-ichiyôran

*Microstylis monophyllos* Lindl. (1740m ~)

Hozaki-ichiyôran

*Liparis kumokiri* F. Maekawa

Kumokiri-sô

*L. krameri* Franch. et Savat.

Zigabachi-sô

*Calanthe reflexa* Maxim. (U. 300m)

Natsu-ebine

*C. tricarinata* Lindl.

Sarumen-ebine

*Cremastra appendiculata* Makino

Saihai-ran

*Oreorchis patens* Lindl.

Kokei-ran

*Dactylostylis ringens* Reichb. fil. (1000m)

Ichiyô-ran

*Cymbidium goeringii* Reichb. fil.

Shun-ran

**DICOTYLEDONEAE**

**CHORIPETALAE**

**SAURURACEAE**

*Houttuynia cordata* Thunb.

Dokudami

**CHLORANTHACEAE**

*Chloranthus japonicus* Sieb.

Hitori-shizuka

*C. serratus* Roem. et Schult.

Futari-shizuka

**SALICACEAE**

*Populus sieboldii* Miq̄uel

Yama-narashi

*Salix serissaefolia* Kimura

Kogome-yanagi

*S. bakko* Kimura

Bakko-yanagi

*S. reinii* Franch. et Savat. (Hotokegadaira)

Miyama-yanagi

*S. futura* Seemen

Oo-nekoyanagi

*S. vulpina* Anders. (U. S.)

Kitsune-yanagi

*S. sachalinensis* Fr. Schm.

Onoe-yanagi

*S. integra* Thunb.

Inukori-yanagi

*S. gracilistyla* Miq. (U. F.)

Neko-yanagi

*S. gilgiana* Seemen (U. F.)

Kawa-yanagi

**JUGLANDACEAE**

*Pterocarya rhoifolia* Sieb. et Zucc.

Sawa-gurumi

*Juglans ailanthifolia* Carr.

Oni-gurumi

**BETULACEAE**

*Carpinus laxiflora* Blume

Aka-shide

*C. japonica* Blume

Kuma-shide

*C. cordata* Blume

Sawashiba

*Corylus sieboldiana* Blume

Tuno-hashibami

*Betula maximowicziana* Regel

Udai-kanba

*B. corylifolia* Regel et Maxim (1400m ~)

Neko-shide

*B. ermanii* Cham. (1400m ~)

Dakekanba

*B. grossa* Sieb. et Zucc.

Yoguso-minebari

*Alnus sieboldiana* Matsum. (U. F. S.)

Ooba-yashabusi

*A. pendula* Matsum.

Hime-yashabusi

*A. hirsuta* Turcz.

Ke-yamahannoki

*A. matsumurae* Callier (1500m ~1800m)  
*A. fauriei* Lèveillé

Yahazu-hannoki  
 Miyama-kawahannoki

# FAGACEAE

*Fagus crenata* Blume  
*Quercus salicina* Blume (U. C.)  
*Q. mongolica* Fischer var. *grosseserrata* Rehd. et Wils.  
*Q. serrata* Thunb.  
*Q. aliena* Blume  
*Q. acutissima* Carruth.  
*Castanea crenata* Sieb. et Zucc.

Buna  
 Uraziro-gashi  
 Mizu-nara  
 Ko-nara  
 Nara-gashiwa  
 Kunugi  
 Kuri

# ULMACEAE

*Ulmus laciniata* Mayr  
*Zelkova serrata* Makino

Ohyô  
 Keyaki

# MORACEAE

*Morus bombycis* Koidz.  
*Humulus japonicus* Sieb. et Zucc.  
*H. lupulus* Linn. var. *cordifolius* Maxim.

Yama-guwa  
 Kana-mugura  
 Karahana-sô

# URTICACEAE

*Laportea bulbifera* Weddell.  
*L. macrostachya* Ohwi  
*Pilea mongolica* Weddell (U. F.)  
*P. hamaoi* Makino (U. F. S.)  
*Elatostema umbellatum* Blume var. *majus* Maxim.  
*E. densiflorum* Franch. et Savat.  
*Boehmeria tricuspidata* Makino  
*B. longispica* Steud.

Mukago-irakusa  
 Miyama-irakusa  
 Ao-mizu  
 Mizu  
 Uwabami-sô  
 Tokihokori  
 Akaso  
 Yabu-mao

# SANTALACEAE

*Thesium chinense* Turcz. (U. F.)  
*Buckleya lanceolata* Miq.

Kanabiki-sô  
 Tsukubane

# LORANTHACEAE

*Taxillus kaempferi* Danser (U.)  
*Viscum album* Linn. var. *coloratum* Ohwi

Matsu-gumi  
 Yadorigi

**ARISTOLOCHIACEAE**

*Heterotropa yoshikawai* F. Maekawa (~1350m)  
*Asarum caulescens* Maxim.

Kubiki-kan'aoi  
 Futaba-aoi

**BALANOPHORACEAE**

*Balanophora nipponica* Makino (1300m)

Miyama-tsuchitorimochi

**POLYGONACEAE**

*Rumex acetosella* Linn. (U.)  
*R. acetosa* Linn. (U. F. S.)  
*R. montanus* Desf. (1600m)  
*R. japonicus* Houtt. (U. F.)  
*R. conglomeratus* Murr. (U. F. S.)  
*R. obtusifolius* Linn. (U. F. S.)  
*Polygonum filiforme* Thunb. (U. F. S.)  
*P. aviculare* Linn. (U. F. S.)  
*P. aequale* Lindm. (U. F. S.)  
*P. thunbergii* Sieb. et Zucc. (U. F. S.)  
     var. *hastatotriloea* Miyabe (U. F. S.)  
*P. sieboldii* Meisn. var. *sieboldi* Nakai (U. F. S.)  
*P. nepalense* Meisn.  
*P. lapathifolium* Linn. (U. F.)  
*P. conspicuum* Nakai (U. F. S.)  
*P. hydropiper* Linn. (U. F.)  
*P. viscoferum* Makino var. *robustum* Makino  
*P. caespitosum* Blume var. *laxiflorum* Meisn. (U. F.)  
*P. longisetum* De Bruyn (U. F. S.)  
*P. weyrichii* Fr. Schm. (1500m ~)  
*P. cuspidatum* Sieb. et Zucc. var. *intermedia* Tatewaki  
     var. *uzenense* Okuyana  
     var. *comppacta* Hiyama (Mt. Maekoma)  
*P. sachalinense* Fr. Schm.

Hime-suiba  
 Suiba  
 Takane-suiba  
 Gishigishi  
 Arechi-gishigishi  
 Ezono-gishigishi  
 Mizuhiki  
 Michi-yanagi  
 Hai-michiyanagi  
 Mizo-soba  
 Oo-mizosoba  
 Akino-unagitsukami  
 Tani-soba  
 Oo-inutade  
 Sakura-tade  
 Yanagi-tade  
 Oo-nebaritade  
 Hana-tade  
 Inu-tade  
 Uraziro-tade  
 Ezo-itadori  
 Ke-itadori  
 Onoe-itadori  
 Oo-itadori

**AMARANTHACEAE**

*Achyranthes japonica* Nakai (U. F. S.)  
*A. fauriei* Lév. et Van. (U. F. S.)

Hikage-inokozuchi  
 Hinata-inokozuchi

**PHYTOLACCACEAE**

*Phytolacca americana* Linn. (U. F.)

Yôshu-yamagobô

**PORTULACACEAE**

*Portulaca oleracea* Linn. (U. F. S.)

Suberi-hiyu

**CARYOPHYLLACEAE**

*Sagina japonica* Ohwi (U. F.)

Tsume-kusa

*Arenaria serpyllifolia* Linn. (U. F.)

Nomino-tsuzuri

*Cerastium glomeratum* Thuill. (U. F.)

Oranda-miminagusa

*C. holosteoides* Fries var. *hallaianense* Mizushima (U. F. S.)

Mimina-gusa

*Stellaria aquatica* Scop. (U. F.)

Ushi-hakobe

*S. sessiliflora* Yabe

Miyama-hakobe

*S. media* Villars

Ko-hakobe

*S. neglecta* Weihe

Midori-hakobe

*S. diversiflora* Maxim. var. *robusta* Okuyama

Oo-sawahakobe

*S. alsine* Grimm var. *undulata* Ohwi

Nomino-fusuma

*Dianthus superbus* Linn. var. *longicalycinus* Williams (U. S.)

Kawara-nadeshiko

*Lychnis gracillima* Makino (1500m ~ 1800m)

Senzyu-ganpi

*Melandryum firmum* Rohrb. (Unazuki)

Fushiguro

*Silene gallica* Linn. var. *quinquevulnera* Rohrb. (U.)

Mantema

**EUPTELEACEAE**

*Euptelea polyandra* Sieb. et Zucc.

Fusazakura

**CERCIDIPHYLLACEAE**

*Cercidiphyllum magnificum* Nakai

Hiroha-katsura

**RANUNCULACEAE**

*Clematis stans* Sieb. et Zucc.

Kusa-botan

*C. apiifolia* DC.

Botan-zuru

*C. terniflora* DC.

Sennin-sô

*Anemone hepatica* Linn. forma *variegata* Hara (U. 200m ~ 300m)

Suhamasô

*A. pseudo-altaica* Hara

Kikuzaki-ichirinsô

forma *albiflora* Okuyama

Shirobana-kikuzakiichirinsô

*A. debilis* Fischer

Hime-ichige

*A. stolonifera* Maxim.

Sanrin-sô

*A. flaccida* Fr. Schm.

Nirin-sô

*Ranunculus japonicus* Thunb.

Umano-ashigata

*R. quelpaertensis* Nakai var. *glaber* H. Boiss  
var. *quelpaertensis*

Kitsuneno-botan

Yama-kitsunenobotan



The Vegetation of Mt. Sôgadake, The Japan North Alps

<i>Thalictrum minus</i> Linn. var. <i>hypoleucum</i> Miq.	Aki-karamatsu
<i>T. rochebrunianum</i> Franch. et Savat.	Shikin-karamatsu
<i>T. aquilegifolium</i> Linn.	Karamatsu-sô
<i>T. filamentosum</i> Maxim. var. <i>tenerum</i> Ohwi	Miyama-karamatsu
<i>T. japonica</i> Sieb. et Zucc. (1600m ~)	Momizi-karamatsu
<i>Aconitum hakusanense</i> Nakai (1600m)	Hakusan-torikabuto
<i>A. japonicum</i> Thunb. var. <i>montanum</i> Nakai (500m)	Yama-torikabuto
<i>Cimicifuga simplex</i> Wormsk.	Sarashina-shôma
<i>Coptis trifolia</i> Salisb.	Mitsuba-ôren
<i>C. quinquefolia</i> Miq. (1700m ~)	Baika-ôren
<i>C. japonica</i> Makino var. <i>japonica</i>	Kikuba-ôren
<i>C. trifoliolata</i> Makino	Mitsubano-baikaôren
<i>Isopyrum nipponicum</i> Franch.	Azuma-shiroganesô
<i>Glaucidium palmatum</i> Sieb. et Zucc.	Shirane-aoi
<i>Paeonia japonica</i> Miyabe et Takeda	Yama-shakuyaku

**LARDIZABALACEAE**

<i>Akebia quinata</i> Decaisne	Akebi
<i>A. trifoliata</i> Koidz.	Mitsuba-akebi
<i>A. pentaphylla</i> Makino	Goyô-akebi

**BERBERIDACEAE**

<i>Berberis tschonoskyana</i> Regel (U.)	Ooba-megi
<i>B. thunbergii</i> DC.	Megi
<i>Caulophyllum robustum</i> Maxim.	Ruiyô-botan
<i>Epimedium cremeum</i> Nakai	Kibana-ikarisô
<i>Diphylleia grayi</i> Fr. Schm.	Sankayô
<i>forma incisa</i> Takeda	Kireha-sankayô

**MENISPERMACEAE**

<i>Menispermum dauricum</i> DC.	Kômorikazura
<i>Sinomenium acutum</i> Rehd. et Wils.	Tuzura-fuzi
<i>Cocculus trilobus</i> DC.	Ao-tsuzurafuzi

**MAGNOLIACEAE**

<i>Magnolia obovata</i> Thunberg	Hoono-ki
<i>M. salicifolia</i> Maxim.	Tamushiba
<i>Schisandra repanda</i> Radlk.	Matsubusa

**LAURACEAE**

*Lindera obtusiloba* Blume  
*L. umbellata* Thunb. var. *membranacea* Momiyama  
*Parabenzoin praecox* Nakai

Dankôbai  
Ooba-kuromozu  
Aburachan

**PAPAVERACEAE**

*Chelidonium majus* Linn. var. *asiaticum* Ohwi  
*Macleaya cordata* R. Br.  
*Corydalis ambigua* Cham. et Schlecht.  
*C. lineariloba* Sieb. et Zucc.  
*C. capillipes* Franch.  
*C. decumbens* Pers.  
*C. incisa* Pers.  
*C. pallida* Pers. var. *tenuis* Yatabe

Kusano-ô  
Takeni-gusa  
Ezo-engosaku  
Yama-engosaku  
Michinoku-engosaku  
Zirobô-engosaku  
Murasaki-keman  
Miyama-kikeman

**CRUCIFERAE**

*Lepidium virginicum* Linn. (U. F.)  
*Cardamine impatiens* Linn.  
*C. flexuosa* With. (U. F.)  
    var. *fallax* O. E. Schulz  
*C. scutata* Thunb.  
*C. yezoensis* Maxim. var. *torrentis* Ohwi  
*Barbarea orthoceras* Ledeb. (Co. U. 1600 m)  
*Rorippa indica* Hochr.  
*R. islandica* Borbás  
*Capsella bursa-pastoris* Medik.  
*Arabis serrata* Franch. et Savat. var. *japonica* Ohwi  
*A. hirsuta* Scop.  
*A. gemmifera* Makino

Mame-gumbainazuna  
Zya-ninjin  
Tane-tsukebana  
Tachi-tanetsukebana  
Ooba-tanetsukebana  
Okuyama-garashi  
Yama-garashi  
Inu-garashi  
Sukashi-tagobô  
Nazuna  
Iwa-hatazao  
Yama-hatazao  
Hakusan-hatazao

**DROSERACEAE**

*Drosera rotundifolia* Linn.

Môsen-goke

**CRASSULACEAE**

*Sedum verticillatum* Linn.  
*S. aizoon* Linn.  
*S. kamtschaticum* Fischer  
*S. japonicum* Siebold  
    var. *senanense* Makino (Mt. Maekoma)

Mitsuba-benkeisô  
Hosobano-kirinsô  
Kirin-sô  
Meno-mannengusa  
Miyama-mannengusa

*S. bulbiferum* Makino  
*S. erubescens* Ohwi

Komochi-mannengusa  
Tume-rengé

#### SAXIFRAGACEAE

*Rodgersia podophylla* A. Gray  
*Astilbe thumbergii* Miq.  
    var. *congesta* H. Boiss.  
*Sauifraga fusca* Maxim. var. *kikubuki* Ohwi  
*S. fortunei* Hook. fil. var. *incislobata* Nakai  
    var. *alpina* Nakai  
    var. (Co. U. 1300m)  
*S. nipponica* Makino  
*Boykinia lycopodiumifolia* Engler  
*Chrysosplenium fauriei* Franch.  
*C. grayanum* Maxim.  
*C. japonicum* Makino  
*Tiarella polyphylla* D. Don  
*Mitella koshiensis* Ohwi (Co. K. 700m)  
*Parnassia palustris* Linn.  
*P. alpicola* Makino (1700m ~)  
*Schizophragma hydrangeoides* Sieb. et Zucc.  
*Cardiandra alternifolia* Sieb. et Zucc.  
*Hydrangea petiolaris* Sieb. et Zucc.  
*H. paniculata* Siebold  
*H. involucrata* Siebold  
*H. macrophylla* Ser. var. *megacarpa* Ohwi  
*Philadelphus satsumi* Sieb., et Lindl. et Paxton.  
*Deutzia gracilis* Sieb. et Zucc.  
*Ribes ambiguum* Maxim.

Yaguruma-sô  
Aka-shôma  
Toriashi-shôma  
Kurokumo-sô  
Daimonzi-sô  
Miyama-daimonzisô  
Urabeni-daimonzisô  
Haru-yukinosita  
Arashi-gusa  
Hokuriku-nekonome  
Nekonome-sô  
Yama-nekonomesô  
Zudayakushu  
Koshino-charumerusô  
Umebachi-sô  
Hime-umebachisô  
Iwa-garami  
Kusa-azisai  
Tsuru-azisai  
Nori-utsugi  
Tama-azisai  
Ezo-azisai  
Baika-utsugi  
Hime-utsugi  
Yasha-bishaku

#### HAMAMELIDACEAE

*Hamamelis japonica* Sieb. et Zucc.  
    var. *obtusata* Matsum.  
    forma *flavo-purpurascens* Rehd.

Maruba-mansaku  
Nishiki-mansaku

#### ROSACEAE

*Aruncus dioicus* Fern. var. *kamtschaticus* Hara  
*Duchesnea chrysantha* Miq.  
*Fragaria iinumae* Makino

Yama-bukishôma  
Hebi-ichigo  
Nôgô-ichigo

<i>Potentilla kleiniana</i> Wight et Arnott	O-hebiichigo
<i>P. dickinsii</i> Franch. et Savat. (Co. K. 600m)	Iwa-kinbai
<i>P. matsumurae</i> Th. Wolf (Mt. Gozen)	Miyama-kinbai
<i>P. fragarioides</i> Linn. var. <i>major</i> Maxim.	Kizi-mushiro
<i>P. togasii</i> Ohwi	Echigo-kizimushiro
<i>P. stolonifera</i> Lehm.	Tsuru-kizimushiro
<i>P. freyniana</i> Bornm.	Mitsuba-tsuchiguri
<i>Geum pentapetalum</i> Makino (Co. U. 1350m ~)	Chinguruma
<i>G. japonicum</i> Thunb.	Daikon-sô
<i>G. calthaefolium</i> Smith. var. <i>nipponicum</i> Ohwi (Mt. Maekoma)	Miyama-daikonsô
<i>Rubus hakonensis</i> Franch. et Savat.	Miyama-fuyuichigo
<i>R. microphyllus</i> Linn. fil. var. <i>subcrataegifolius</i> Ohwi	Miyama-nigaichigo
<i>R. crataegifolius</i> Bunge	Kuma-ichigo
<i>R. palmatus</i> Thunb. var. <i>coptophyllus</i> Koidz.	Momizi-ichigo
<i>R. vernus</i> Focke (1700m ~)	Benibana-ichigo
<i>R. hirsutus</i> Thunb.	Kusa-ichigo
<i>R. yabei</i> Lev. et Van.	Miyama-uraziroichigo
<i>R. mesogaeus</i> Focke	Kuro-ichigo
<i>R. parvifolius</i> Linn. (U. K.)	Nawashiro-ichigo
<i>R. phoenicolasius</i> Maxim.	Ebigara-ichigo
<i>R. pedatus</i> Smith	Kogane-ichigo
<i>R. ikenoensis</i> Lev. et Van. (Mt. Maekoma)	Goyô-ichigo
<i>Filipendula kamtschatica</i> Maxim.	Oni-shimotsuke
<i>forma pilosa</i> Koidz.	Usuge-onishimotsuke
<i>F. auriculata</i> Kitam.	Koshizi-shimotsuke
<i>F. multijuga</i> Maxim.	Shimotsuke-sô
<i>Sanguisorba tenuifolia</i> Fisch. var. <i>purpurea</i> Trautv. et Mey. (Hotokegadaira)	Nagabono-akawaremoko
<i>S. hakusanensis</i> Makino	Karaito-sô
<i>Agrimonia pilosa</i> Ledeb.	Kin-mizuhiki
<i>Rosa multiflora</i> Thunb.	No-ibara
<i>R. acicularis</i> Lindl. var. <i>nipponensis</i> Koehne (1780m ~)	Takane-ibara
<i>Prunus apetala</i> Franch. et Savat. var. <i>pilosa</i> Wilson	Okuchôzi-sakura
<i>P. nipponica</i> Matsum. (1700m ~)	Mine-zakura
<i>P. sargentii</i> Rehder	Oo-yamazakura
<i>forma pubescens</i> Ohwi	Ke-ezoyamazakura
<i>P. verecunda</i> Koehne	Kasumi-zakura

<i>P. grayana</i> Maxim.	Uwamizu-zakura
<i>Malus sieboldii</i> Rehder	Zumi
<i>Amelanchier asiatica</i> Endl.	Zaifuri-boku
<i>Pourthiaea villosa</i> Decne. var. <i>zollingeri</i> Nakai	Ke-kamatsuka
<i>Sorbus commixta</i> Hedl.	Nanakamado
var. <i>rufo-ferruginea</i> C. K. Schn.	Sabiba-nanakamado
<i>S. gracilis</i> C. Koch	Nankin-nanakamado
<i>S. alnifolia</i> C. Koch	Azuki-nashi
<i>S. japonica</i> Hedl.	Urazirono-ki

### LEGUMINOSAE

<i>Albizia julibrissin</i> Durazz.	Nemuno-ki
<i>Cassia nomame</i> Honda (U. F. S)	Kawara-ketsume
<i>Sophora flavescens</i> Aiton	Kurara
<i>Maackia amurensis</i> Rupr. et Maxim. var. <i>buergeri</i> C. K. Schn. (U. F.)	Inu-enzyu
<i>Lespedeza bicolor</i> Turcz. forma <i>acutifolia</i> Matsum.	Yama-hagi
<i>L. thunbergii</i> Nakai	Miyagino-hagi
<i>L. cuneata</i> G. Don	Medo-hagi
<i>L. pilosa</i> Sieb. et Zucc.	Neko-hagi
<i>Kummerovia striata</i> Schindler	Yahazu-sô
<i>Desmodium oxyphyllum</i> DC.	Nusubito-hagi
<i>D. fallax</i> Schindl.	Yabu-hagi
<i>Aeschynomene indica</i> Linn. (U. F.)	Kusa-nemu
<i>Hedysarum vicioides</i> Turcz. (Mt. Maekoma)	Iwa-ôgi
<i>Vicia angustifolia</i> Linn. var. <i>segetalis</i> Koch	Yahazu-endô
<i>V. tetrasperma</i> Schreb. (U. K.)	Kasuma-gusa
<i>V. hirsuta</i> S. F. Gray (U. K.)	Suzumeno-endô
<i>V. venosa</i> Maxim.	Ebira-fuzi
<i>V. unijuga</i> A. Br.	Nanten-hagi
<i>Dumasia truncata</i> Sieb. et Zucc.	No-sasage
<i>Apios fortunei</i> Maxim.	Hodo-imo
<i>Pueraria lobata</i> Ohwi	Kuzu
<i>Amphicarpaea edgeworthii</i> benth. var. <i>japonica</i> Oliver	Yabu-mame
<i>Indigofera pseudo-tinctoria</i> Matsum.	Koma-tsunagi
<i>Wisteria floribunda</i> DC.	Fuzi
<i>Lotus corniculatus</i> Linn. var. <i>japonicus</i> Regel	Miyako-gusa
<i>Trifolium repens</i> Linn.	Shiro-tsumekusa

**GERANIACEAE**

*Geranium thunbergii* Sieb. et Zucc.

Genno-shôko

**OXALIDACEAE**

*Oxalis acetosella* Linn. (1400m ~)

Ko-miyamakatabami

*O. griffithii* Edgew. et Hook. fil.

Miyama-katabami

*O. corniculata* Linn.

Katabami

**RUTACEAE**

*Zanthoxylum piperitum* DC.

Sanshō

forma *inermis* Makino

Asakura-zanshō

*Z. schinifolium* Sieb. et Zucc.

Inu-zanshō

*Z. ailanthoides* Sieb. et Zucc.

karasu-zanshō

*Phellodendron amurense* Rupr.

Kihada

*Skimmia japonica* Thunb.

Miyama-shikimi

**SIMAROUBACEAE**

*Picrasma quassioides* Benn.

Niga-ki

**POLYGALACEAE**

*Polygala japonica* Houtt. (F.)

Hime-hagi

**EUPHORBIACEAE**

*Daphniphyllum macropodum* Miq. var. *humile* Rosenthal

Ezo-yuzuriha

*Phyllanthus urinaria* Linn. (U. F.)

Ko-mikansō

*Acalypha australis* Linn. (U. F.)

Enoki-gusa

*Mallotus japonicus* Muell. Arg.

Akame-gashiwa

*Euphorbia supina* Rafin.

Ko-nishikisō

*E. sieboldiana* Morr. et Decne.

Natsu-tōdai

**BUXACEAE**

*Buxus microphylla* Sieb. et Zucc. var. *japonica* Rehd. et Wils. (U. 200m)

Tsuge

**CORIARIACEAE**

*Coriaria japonica* A. Gray (U. S.)

Doku-utsugi

**ANACARDIACEAE**

*Rhus ambigua* Lavallée, ex Dippel

Tsuta-urushi

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*R. trichocarpa* Miq.

Yama-urushi

*R. javanica* Linn.

Nurude

**AQUIFOLIACEAE**

*Ilex sugerokii* Maxim. var. *brevipedunculata* S. Y. Hu  
(600 m ~)

Akamino-inutsuge

*I. crenata* Thunb. var. *paludosa* Hara

Hai-inutsuge

*I. pedunculosa* Miq.

Soyogo

*I. rugosa* Fr. Schm.

Tsuru-tsuge

*I. leucoclada* Makino

Hime-mochi

**CELASTRACEAE**

*Euonymus alatus* Sieb. forma *ciliatodentatus* Hiyama  
var. *rotundatus* Hara  
var. *sanguineus* Nakai

Ko-mayumi

Oo-komayumi

Kantô-mayumi

*E. fortunei* Hand. -Mazz. var. *radicans* Rehd.

Tsuru-masaki

*E. sieboldianus* Blume

Mayumi

*E. macropterus* Rupr.

Hiroha-tsuribana

*E. oxyphyllus* Miq.

Tsuri-bana

*E. tricuspidatus* Koidz.

Kuro-tsuribana

**STAPHYLEACEAE**

*Staphylea bumalda* DC. (U.)

Mitsuba-utsugi

**ACERACEAE**

*Acer sieboldianum* Miq.

Ko-hauchiwakaede

*A. japonicum* Thunb.

Hauchiwa-kaede

*A. shirasawanum* Koidz.

Oo-itayameigetsu

*A. palmatum* Thunb. var. *amoenum* Ohwi  
var. *matsumurae* Makino

Oo-momizi

Yama-momizi

*A. tenuifolium* Koidz.

Hina-uchiwakaede

*A. mono* Maxim. var. *mayrii* Koidz., et Nemoto  
var. *ambiguum* Rehd.

Aka-itaya

Oni-itaya

var. *trichobasis* Nakai

Motoge-itaya

var. *connivens* Hara

Urage-enkôkade

*A. distylum* Sieb. et Zucc.

Hitotsuba-kaede

*A. ukurunduense* Trautv. et Mey.

Ogara-bana

var. *pilosum* Nakai

Usuge-ogarabana

*A. nipponicum* Hara (Co. U. 1780 m)

Tetsu-kaede

*A. crataegifolium* Sieb. et Zucc.  
*A. rufinerve* Sieb. et Zucc.  
*A. tschonoskii* Maxim.  
*A. micranthum* Sieb. et Zucc.  
*A. nikoense* Maxim.

Uri-kaede  
 Urihada-kaede  
 Mine-kaede  
 Ko-minekaede  
 Megusurino-ki

# HIPPOCASTANACEAE

*Aesculus turbinata* Blume  
 forma *pubescens* Ohwi

Urage-tochinoki

# SABIACEAE

*Meliosma myrianthe* Sieb. et Zucc.  
*M. tenuis* Maxim.

Awabuki  
 Miyama-hahaso

# BALSAMINACEAE

*Impatiens noli-tangere* Linn.  
*I. textori* Miq.

Kitsuri-hune  
 Tsuri-hunesô

# RHAMNACEAE

*Berchemia longeracemosa* Okuyama  
*B. racemosa* Sieb. et Zucc.  
*Rhamnus japonica* Maxim.  
*R. davurica* Pall. var. *nipponica* Makino  
*Hovenia dulcis* Thunb.

Honaga-kumayanagi  
 Kuma-yanagi  
 Kuro-umemodoki  
 Kuro-tsubara  
 Kenpo-nashi

# VITACEAE

*Vitis coignetiae* Pulliat  
*V. ficifolia* Bunge var. *lobata* Nakai  
*V. flexuosa* Thunb.  
*Ampelopsis brevipedunculata* Trautv.  
*Cayratia japonica* Gagn.

Yama-budô  
 Ebizuru  
 Sankaku-zuru  
 No-budô  
 Yabu-garashi

# TILIACEAE

*Tilia maximowicziana* Shirasawa (U.)  
*T. japonica* Simonkai  
*T. nozircicola* Hisauti (U. F.)

Ooba-bodaizyu  
 Shinano-ki  
 Noziri-bodaizyu

# ACTINIDIACEAE

*Actinidia arguta* Planch., ex Miq.

Sarunashi



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<i>A. polygama</i> Maxim.	Matatabi
<i>A. kolomikta</i> Maxim.	Miyama-matatabi

**THEACEAE**

<i>Camellia rusticana</i> Honda (~1600m)	Yuki-tsubaki
<i>Camellia</i> sp.	Yukibata-tsubaki

**GUTTIFERAE**

<i>Hypericum japonicum</i> Thunb.	Hime-otogiri
<i>H. pseudopetiolatum</i> R. Keller	Sawa-otogiri
<i>H. erectum</i> Thunb.	Otogiri-sô
<i>H. kamtschaticum</i> Ledeb. (1200m ~)	Iwa-otogiri

**VIOLACEAE**

<i>Viola vaginata</i> Maxim.	Sumire-saishin
<i>V. mandshurica</i> W. Becker	Sumire
<i>V. pumilio</i> W. Becker (U. F. S.)	Humoto-sumire
<i>V. rostrata</i> Muhl. var. <i>japonica</i> Ohwi (U. F. S.)	Nagahashi-sumire
<i>V. verecunda</i> A. Gray (U. F. S.)	Tsubo-sumire
var. <i>fibrillosa</i> Ohwi (1600m ~)	Miyama-tsubosumire
<i>V. selkirkii</i> Pursh (1500m ~)	Miyama-sumire
<i>V. kusanoana</i> Makino	Oo-tachitsubosumire
<i>V. grypoceras</i> A. Gray	Tachi-tsubosumire
<i>V. biflora</i> Linn. (1600m ~)	Kibanano-komanotsume
<i>V. brevistipulata</i> W. Becker (Co. U 1700m ~)	Ooba-kisumire

**STACHYURACEAE**

<i>Stachyurus praecox</i> Sieb. et Zucc.	Kibushi
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**ELAEAGNACEAE**

<i>Elaeagnus umbellata</i> Thunb. (U.)	Aki-gumi
<i>E. multiflora</i> Thunb. var. <i>hortensis</i> Serv. (Co. U. 1300m)	Tô-gumi

**LYTHRACEAE**

<i>Rotala indica</i> Koehne (U.)	Kikashi-gusa
<i>Lythrum anceps</i> Makino (U. F.)	Miso-hagi

**ALANGIACEAE**

<i>Alangium platanifolium</i> Harms var. <i>trilobum</i> Ohwi	Urino-ki
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var. *platanifolium*

Momizi-urinoki

## ONAGRACEAE

*Circaea mollis* Sieb. et Zucc.

*C. alpina* Linn.

*Epilobium palustre* Linn. var. *lavandulaefolium* Lecoq et  
Lamotte (1820m)

*E. fauriei* L  veill   (1820m ~)

*E. cephalostigma* Hausskn.

var. *nudicarpum* Hara

*E. foucaudianum* L  veill   (1500m ~)

Mizutama-s  

Miyama-tanitate

Hosoba-akabana

Hime-akabana

Iwa-akabana

Kenashi-iwaakabana

Miyama-akabana

## HALORAGACEAE

*Haloragis micrantha* R. Br. (U. F. S.)

Arino-t  gusa

## ARALIACEAE

*Aralia elata* Seemann

*A. cordata* Thunb.

*A. glabra* Matsum.

*Panax japonicus* C. A. Meyer forma *dichrocarpus* Nakai

*Hedera rhombea* Bean

*Acanthopanax nipponicus* Makino, saltem P. P.

*A. spinosus* Miq.

*A. sciadophylloides* Franch. et Savat.

*Evodiopanax innovans* Nakai

*Kalopanax pictus* Nakai forma *majnificus* Nakai

forma *maximowiczii* Hara

*Oplopanax japonicus* Nakai

forma *inermis* Takeda

Tarano-ki

Udo

Miyama-udo

S  shishiy  -ninzin

Ki-zuta

Oka-ukogi

Yama-ukogi

Koshi-abura

Takano-tsume

Ke-harigiri

Kireha-harigiri

Hari-buki

Me-haribuki

## UMBELLIFERAE

*Hydrocotyle maritima* Honda (U. F. S.)

*Bupleurum nipponicum* Koso-Poliansky (Hotokegadaira)

*Sanicula chinensis* Bunge

*Authriscus sylvestris* Hoffm.

*Osmorhiza aristata* Makino et Yabe

*Torilis scabra* DC.

*Cryptotaenia japonica* Hassk.

*Pternopetalum tanakae* Hand. -Mazz. (1500m)

No-chidome

Hakusan-saico

Umano-mitsuba

Shaku (ko-shaku)

Yabu-ninzin

O-yabuzirami

Mitsuba

Iwa-sentos  

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<i>Oenanthe javanica</i> DC.	Seri
<i>Pleurospermum camtschaticum</i> Hoffm. (Co. K. 500m)	Oo-kasamochi
<i>Libanotis coreana</i> Kitag. (Co. K. 600m)	Ibuki-bôhû
var. <i>alpina</i> Kitag. (Mt. Maekoma)	Takane-ibukibôhû
<i>Tilingia ajanensis</i> Regel	Shirane-ninzin
forma <i>pectinatum</i> Kitagawa	Hosoba-shiraneninzin
<i>T. tachiroei</i> Kitagawa (Mt. maekoma)	Miyama-uikyô
<i>Coelopleurum multisectum</i> Kitagawa (Co. K. 1500m)	Miyama-zenko
<i>Dystaenia ibukiensis</i> Kitagawa	Seri-modoki (Tani-seri modoki)
<i>Conioselinum filicinum</i> Hara	Miyama-senkyû
<i>Angelica acutiloba</i> Kitagawa var. <i>iwatensis</i> Hikino	Iwate-tôki
<i>A. genuflexa</i> Nutt. (Katakai)	Ooba-senkyû
<i>A. edulis</i> Miyabe, ex Yabe (Hotokegadaira)	Amanyû
<i>A. pubescens</i> Maxim. (Katakai)	Shishi-udo
var. <i>matsumurae</i> Ohwi	Miyama-shishiudo
<i>Peucedanum multivittatum</i> Maxim.	Hakusan-bôhû
forma <i>dissectum</i> Makino	Kireha-hakusanbôhû
<i>Heracleum dulce</i> Fisch.	Oo-hanaudo

CORNACEAE

<i>Aucuba japonica</i> Thunb. var. <i>borealis</i> Miyabe et Kudo	Hime-aoki
<i>Helwingia japonica</i> F. G. Dietr.	Hana-ikada
<i>Cornus controversa</i> Hemsley	Mizuki
<i>C. brachypoda</i> C. A. Mey.	Kumano-mizuki
<i>C. kousa</i> Buerger, ex Hance	Yamabôshi
<i>C. canadensis</i> Linn.	Gozen-tachibana

GAMOPETALAE

DIAPENSIACEAE

<i>Shortia uniflora</i> Maxim.	Iwa-uchiwa
<i>S. soldanelloides</i> Maikno	Iwa-kagami
forma <i>alpina</i> Makino (1850m)	Ko-iwakagami
var. <i>magna</i> Makino	Oo-iwakagami

CLETHRACEAE

<i>Clethra barbinervis</i> Sieb. et Zucc.	Ryôbu
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**PYROLACEAE**

*Pyrola japonica* Klenze  
*Chimaphila japonica* Miq.  
*Monotropa hypopithys* Linn.

Ichiyaku-sô  
 Umegasa-sô  
 Shakuzyô-sô

**ERICACEAE**

*Tripetaleia bracteata* Maxim.  
*T. paniculata* Sieb. et Zucc.  
*Menziesia pentandra* Maxim.  
*M. multiflora* Maxim.  
     forma *brevicalyx* Hiyama  
*Rhododendron brachycarpum* D. Don (1400m ~)  
     var. *roseum* Koidz.  
*R. metternichii* Sieb. et Zucc var. *hondoense* Nakai  
*R. trinerve* Franch., ex H. Boiss.  
*R. kaempferi* Planch.  
*R. nudipes* Nakai  
*R. albrechtii* Maxim.  
*R. japonicum* Suringer  
*Phyllodoce nipponica* Makino (1500m ~)  
*P. aleutica* A. Heller (Co. U. 1740m)  
*Epigaea asiatica* Maxim.  
*Leucothoe grayana* Maxim. var. *oblongifolia* Ohwi  
     var. *pruinosa* Ohwi  
     var. *parvifolia* Ohwi  
*Lyonia ovalifolia* Drude var. *elliptica* Hand. -Mazz.  
*Gaultheria miqueliana* Takeda  
*G. adenothrix* Maxim.  
*Vaccinium vitis-idaea* Linn. (1780m)  
*V. yatabei* Makino  
*V. ovalifolium* J. E. Smith  
*V. shikokianum* Nakai  
*V. hirtum* Thunb.  
*V. smallii* A. Gray  
*V. oldhamii* Miquel  
*V. japonicum* Miq.

Miyama-hotsutsuzi  
 Hotsutsuzi  
 Ko-yôrakutsutsuzi  
 Uraziro-yôraku  
 Tsurigane-tsutsuzi  
 Hakusan-shakunage  
 Shiobana-shakunage  
 Hon-shakunage  
 Oo-kometsutsuzi  
 Yama-tsutsuzi  
 Saigoku-mitsubatsutsuzi  
 Murasaki-yashio  
 Renge-tsutsuzi  
 Tugazakura  
 Aono-tsugazakura  
 Iwa-nashi  
 Hanahirino-ki  
 Usuyuki-hanahirinoki  
 Hime-hanahirinoki  
 Nezi-ki  
 Shiratamano-ki  
 Akamono  
 Koke-momo  
 Hime-usunoki  
 Kuro-usugo  
 Maruba-usugo  
 Usuno-ki  
 Ooba-sunoki  
 Natsu-haze  
 Akushiba

**MYRSINACEAE**

*Ardisia japonica* Blume

Yabu-kôzi

**PRIMULACEAE**

<i>Trientalis europaea</i> Linn.	Tsumatori-sô
<i>Lysimachia japonica</i> Thunb.	Ko-nasubi
<i>L. clethroides</i> Duby	Oka-toranoo
<i>Primula cuneifolia</i> Ledeb. var. <i>hakusanensis</i> Makino (1830m)	Hakusan-kozakura
<i>P. jesoana</i> Miq. (Co. U. 1720m)	Oo-sakurasô

**SYMPLOCACEAE**

<i>Symplocos chinensis</i> Druce var. <i>leucocarpa</i> Ohwi forma <i>pilosa</i> Ohwi	Shiromino-sawafutagi Sawafutagi
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**STYRACACEAE**

<i>Styrax japonica</i> Sieb. et Zucc.	Egono-ki
<i>S. obassia</i> Sieb. et Zucc.	Hakuun-boku

**OLAECACEAE**

<i>Ligustrum ovalifolium</i> Hassk.	Ooba-ibota
<i>L. tschonoskii</i> Decaisne	Miyama-ibota
<i>Fraxinus sieboldiana</i> Blume	Maruba-aodamo
<i>F. lanuginosa</i> Koidz.	Aodamo
<i>F. apertisquamifera</i> Hara	Miyama-aodamo

**LOGANIACEAE**

<i>Buddleja japonica</i> Hemsl. (Unazuki)	Fuzi-utsugi
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**GENTIANACEAE**

<i>Swertia japonica</i> Makino	Senburi
<i>Gentiana zollingeri</i> Fawcett	Hude-rindô
<i>G. scabra</i> Bunge var. <i>buergeri</i> Maxim.	Rindô
<i>G. makinoi</i> Kusnez.	Oyama-rindô
<i>G. triflora</i> pall. var. <i>japonica</i> Hara	Ezo-rindô
<i>Tripterospermum japonicum</i> Maxim.	Tsuru-rindô
<i>Fauria crista-galli</i> Makino (Co. U. 1400m ~)	Iwa-ichô

**APOCYNACEAE**

<i>Trachelospermum asiaticum</i> Nakai	Teika-kazura
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# ASCLEPIADACEAE

*Cynanchum wilfordii* Hemsl.

Ko-ikema

# CONVOLVULACEAE

*Cuscuta japonica* Choisy

Nenashi-kazura

# BORAGINACEAE

*Cynoglossum asperrimum* Nakai

Oni-rurisô

*Eritrichium nipponicum* Makino (Mt. Maekoma)

Miyama-murasaki

*Trigonotis guilielmii* A. Gray, et Gürcke

Tachi-kamebasô

*T. peduncularis* Benth.

Tabirako

*T. brevipes* Maxim. var. *coronata* Ohwi

Kosizi-tabirako

# VERBENACEAE

*Callicarpa japonica* Thunb.

Murasaki-shikibu

*Clerodendrum trichotomum* Thunb.

Kusa-gi

# LABIATAE

*Ajuga nipponensis* Makino

Zyûni-hitoe

*A. yesoensis* Maxim.

Nishiki-goromo

*A. decumbens* Thunb.

Kiran-sô

*Agastache rugosa* O. Kuntze

Kawamidori

*Meehania urticifolia* Makino (Co. K. 450m)

Rashômon-kazura

*Glechoma hederacea* Linn. var. *grandis* Kudo

Kakidôshi

*Prunella vulgaris* Linn. var. *ilacina* Nakai

Utsubo-gusa

*P. prunelliformis* Makino (Hotokegadaira)

Tateyama-utsubogusa

*Salvia glabrescens* Makino

Akigiri

*Mosla punctulata* Nakai

Inu-kozyû

*M. dianthera* Maxim.

Hime-ziso

*Lycopus uniflorus* Michx.

Ezo-shirone

*Clinopodium chinense* O. Kuntze var. *parviflorum* Hara

Kuruma-bana

*C. micranthum* Hara

Inu-tôbana

*C. gracile* O. Kuntze

Tô-bana

var. *sachalinense* Ohwi

Miyama-tôbana

*Leucosceptrum japonicum* Kitam. et Murata

Tennin-sô

*Elsholtzia ciliata* Hylander

Naginata-kôzyu

*Plectranthus trichocarpus* Maxim.

Kurobana-hikiokoshi

*P. inflexus* Vahl, ex Benth.

Yama-hakka

*P. kameba* Ohwi

Kameba-hikiokoshi

**SOLANACEAE**

<i>Physaliastrum japonicum</i> Honda	Iga-hoozuki
<i>Solanum lyratum</i> Thunb.	Hiyodori-zyôgo
<i>S. nigrum</i> Linn.	Inu-hoozuki

**SCROPHULARIACEAE**

<i>Mimulus nepalensis</i> Benth. var. <i>japonica</i> Miq.	Mizo-hoozuki
<i>M. sessilifolius</i> Maxim.	Oo-mizohoozuki
<i>Mazus miquelii</i> Makino (U. F.)	Murasaki-sagigoke
<i>M. japonicus</i> O. Kuntze (U. F.)	Tokiwa-haze
<i>Lindernia procumbens</i> Philcox (U. F.)	Aze-na
<i>Veronica schmidtiana</i> Regel var. <i>bandaiana</i> Makino (Mt. Maekoma)	Miyama-kuwagata
<i>V. arvensis</i> Linn. (U. F.)	Tachi-inunofuguri
<i>V. persica</i> Poir. (U. F.)	Oo-inunofuguri
<i>Veronicastrum sibiricum</i> Pennell	Kugai-sô
<i>Melampyrum laxum</i> Miq. var. <i>nikkoense</i> Beauverd	Miyama-mamakona
<i>Euphrasia insignis</i> Wettst. (Hotokegadaira)	Miyama-kogomegusa
<i>Phtheirospermum japonicum</i> Kanitz	Ko-shiogama
<i>Pedicularis yezoensis</i> Maxim. (Co. U. 1760m)	Ezo-shiogama
<i>P. resupinata</i> Linn.	Shiogama-giku

**OROBANCHACEAE**

<i>Aeginetia indica</i> Linn. var. <i>gracilis</i> Nakai (U.)	Nanban-giseru
<i>A. sinensis</i> G. Beck	Oo-nanbangiseru

**LENTIBULARIACEAE**

<i>Pinguicula vulgaris</i> Linn. var. <i>macroceras</i> Herder	Mushitori-sumire
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**PHRYMACEAE**

<i>Phryma leptostachya</i> Linn. var. <i>asiatica</i> Hara	Hae-dokusô
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**RLANTAGINACEAE**

<i>Plantago asiatica</i> Linn. (U. F. S.)	Oobako
<i>P. hakusanensis</i> Koidz. (Co. U. 1500m)	Hakusan-oobako
<i>P. lanceolata</i> Linn. (U.)	Hera-oobako

**RUBIACEAE**

<i>Hedyotis lindleyana</i> Hook. var. <i>hirsuta</i> Hara (U. F.)	Hashika-gusa
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<i>Paederia scandens</i> Merrill var. <i>mairei</i> Hara	Hekuso-kazura
<i>Mitchella undulata</i> Sieb. et Zucc.	Tsuru-aridôshi
<i>Rubia chinensis</i> Regel et Maack var. <i>glabrescens</i> Kitagawa	Oo-kinutasô
<i>R. akane</i> Nakai	Akane
<i>Galium verum</i> Linn. var. <i>asiaticum</i> Nakai (Hotokegadaira)	Kibana-kawaramatsuba
<i>G. japonicum</i> Makino	Kuruma-mugura
<i>G. spurium</i> Linn. var. <i>echinospermon</i> Hayek	Yae-mugura
<i>G. pogonanthum</i> Franch. et Savat.	Yama-mugura
<i>G. kamtschaticum</i> Steller, ex Roem. et Schult. var. <i>acutifolium</i> Hara	Oobano-yotsubamugura
<i>G. kinuta</i> Nakai et Hara	Kinuta-sô

#### CAPRIFOLIACEAE

<i>Sambucus sieboldiana</i> Blume, ex Graebn.	Niwatoko
<i>S. chinensis</i> Lindl.	Sokuzu
<i>Viburnum furcatum</i> Blume	Ookameno-ki
<i>V. plicatum</i> Thunb. var. <i>glabrum</i> Hara	Kenashi-yabudemari
<i>V. dilatatum</i> Thunb.	Gamazumi
<i>V. wrightii</i> Miq. forma <i>eglandulosum</i> Hiyama	Hoshinashi-miyamagamazumi
<i>V. erosum</i> Thunb.	Kobano-gamazumi
<i>V. urceolatum</i> Sieb. et Zucc. var. <i>procumbens</i> Nakai	Miyama-shigure
<i>Abelia spathulata</i> Sieb. et Zucc. var. <i>stenophylla</i> Honda	ugo-tsukubaneutsugi
<i>Weigela hortensis</i> K. Koch	Tani-utsugi
<i>Lonicera japonica</i> Thunb.	Sui-kazura
<i>L. ramosissima</i> Franch. et Savat. (Co.K. 700m)	Ko-uguisukagura

#### ADOXACEAE

<i>Patrinia triloba</i> Miq. var. <i>triloba</i>	Hakusan-ominaeshi
<i>P. villosa</i> Juss.	Otokoeshi
<i>P. scabiosaefolia</i> Fisch.	Ominaeshi

#### DIPSACACEAE

<i>Scabiosa japonica</i> Miq var. <i>alpina</i> Takeda (Hotokegadaira)	Takane-matsumushisô
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#### CUCURBITACEAE

<i>Trichosanthes kirilowii</i> Maxim. var. <i>japonica</i> Kitamura (U.F.)	Ki-karasuuri
<i>Actinostemma lobatum</i> Maxim.	Goki-zuru
<i>Melothria japonica</i> Maxim. (U. F.)	Suzume-uri



Schizopepon bryoniaefolius Maxim.

Miyama-nigauri

### CAMPANULACEAE

Adenophora triphylla A. DC var. japonica Hara (U. F. S.)  
 A. nikoensis Franch. et Savat. (Mt. Maekoma)  
 A. remotiflora Miq.  
 Campanula punctata Lam.  
     var. hondoensis Ohwi  
 Peracarpa carnosa Hook. fil. et. Thoms. var. circaeoides  
     Makino  
 Codonopsis lanceolata Trautv.  
 Lobelia chinensis Lour. (U. F.)

Tsurigane-ninjin  
 Hime-shazin  
 Sobana  
 Hotaru-bukuro  
 Yama-hotarubukuro  
  
 Tani-gikyô  
 Tsuru-ninjin  
 Mizo-kakushi

### COMPOSITAE

Gnaphalium affine D. Don (U. F.)  
 Leontopodium japonicum Miq. forma shiroumense Ohwi  
     (Mt. maekoma)  
 Anaphalis margaritacea Benth. et Hook. fil. var. angustior  
     Nakai  
     var. angustifolia Hayata  
 Carpesium divaricatum Sieb. et Zucc.  
 C. triate Maxim.  
 C. glossophyllum Maxim.  
 Leibnitzia anandria Nakai  
 Pertya rigidula Makino  
 Ainsliaea apiculata Sch. Bip.  
 A. acerifolia Schultz Bipont. var. subapoda Nakai  
 Xanthium strumarium Linn.  
 Eupatorium lindleyanum DC.  
 E. chinense Linn. var. simplicifolium Kitam.  
     var. sachalinense Kitam.  
     var. hakonense Kitam.  
 Solidago virga-aurea Linn. var. leiocarpa Miq.  
 Kalimeris pinnatifida Kitam.  
     forma albescens Kitamu.  
 K. yomena Kitam.  
 Erigeron thunbergii A. Gray (Mt. Maekoma)  
     var. asiatica Nakai  
 E. acris Linn. var. linearifolius Kitam.

Hahako-gusa  
  
 Mine-usuyukisô  
  
 Yama-hahako  
 Hosobano-yamahahako  
 Gankubi-sô  
 Miyama-yabutabako  
 Sazi-gankubisô  
 Senbon-yari  
 Kurumaba-haguma  
 Kikko-haguma  
 Okumomizi-haguma  
 Onamomi  
 Sawa-hiyodori  
 Hiyodori-bana  
 Yotsuba-hiyodori  
 Hosoba-yotsubahiyodori  
 Kogane-giku  
 Yûga-giku  
 Shirobana-yûgagiku  
 Yomena  
 Azuma-giku  
 Akino-kirinsô  
 Hosoba-mukashiyomogi

var. amplifolius Kitam. (CO. K. 450m)	Hiroha-mukashiyomogi
<i>E. annuus</i> Pers.	Hime-zyoon
<i>E. sumatrensis</i> Retz.	Oo-arechinogiku
<i>E. canadensis</i> Linn.	Hime-mukashiyomogi
<i>Aster scaber</i> Thunb.	Shirayama-giku
<i>A. glehnii</i> Fr. Schm. var. <i>hondoensis</i> Kitam.	Gomana
<i>A. ageratoides</i> Turcz. var. <i>ovatus</i> Nakai	No-kongiku
forma <i>leucanthus</i> Honda	Yama-shirogiku (Shiro-yomena)
var. <i>ovalifolius</i> Hara	Tamaba-shiroyomena
<i>Petasites japonicus</i> Maxim.	Huki
<i>Arnica mallotopus</i> Makino (Co. U. 1600m)	Chôzi-giku
<i>ligularia fischeri</i> Turcz.	O-takarakô
<i>L. stenocephala</i> Matum. et Koidz.	Me-takarakô
<i>L. dentata</i> Hara (1750m)	Maruba-dakebuki
<i>Senecio cannabifolius</i> Less. (Co. Fu. 1200m)	Hangon-sô
<i>S. takedanus</i> Kitam. (Mt. Maikoma)	Takane-kôrinka
<i>Cacalia adenostyloides</i> Matum.	Kani-kômori
<i>C. delphiniifolia</i> Sieb. et Zucc.	Momizigasa
<i>C. nikomontana</i> Matum.	Oo-kanikômori
<i>C. hastata</i> Linn. var. <i>orientalis</i> Ohwi	Yobusuma-sô
<i>Syneilesis palmata</i> Maxim. (Co. K. 800m)	Yabure-gasa
<i>Centipeda minima</i> A. Braun et Aschers.	Tokin-sô
<i>Chrysanthemum makinoi</i> Matsum. et Nakai	Ryûnô-giku
<i>Artemisia keiskeana</i> Mic.	Inu-yomogi
<i>A. monophylla</i> Kitam.	Hitotsuba-yomogi
<i>A. montana</i> Pampan.	Oo-yomogi
<i>Adenocaulon himalaicum</i> Edgew. (U. F.)	No-buki
<i>Siegesbeckia pubescens</i> Makino (U.)	Menamomi
<i>S. glabrescens</i> Makiko	Ko-menamomi
<i>Eclipta prostrata</i> Linn. (U. F.)	Takasaburô
<i>Bidens frondosa</i> Linn. (U. F. S.)	Amerika-sendangusa
<i>B. tripartita</i> Linn. (F.)	Ta-ukogi
<i>Cirsium yezoense</i> Makino	Sawa-azami
<i>C. japonicum</i> DC. (U. F.)	No-azami
<i>C. nipponense</i> Koidz. (U. F.)	Oni-azami
<i>C. kagamontanum</i> Nakai (Co. Fu.)	Kagano-azami
<i>C. nipponicum</i> Makino	Nanbu-azami
<i>C. matsumurae</i> Nakai	Hakusan-azami

# The Vegetation of Mt. Sôgadake, The Japan North Alps

var. pubescens Kitam.	Ke-hakusanazami
Saussurea sagitta Franch. (Mt. Maekoma)	Yahazu-tôhiren
Synurus pungens Kitam.	Oyama-bokuchi
Lapsana humilis Makino	Yabu-tabirako
L. apogonoides Maxim.	Ko-onitabirako
Picris hieracioides Linn. var. glabrescens Ohwi	Kôzorina
var. alpina Koidz.	Kanchi-kôzorina
Taraxacum elatum Kitam. (U. 300m)	Seitaka-tanpopo
T. officinale Weber	Seiyô-tanpopo
Hieracium japonicum Franch. et Savat. (1600m~)	Miyama-kôzorina
Ixeris stolonifera A. Gray forma capillaris Ohwi (1800m)	Miyama-iwanigana
I. dentata Nakai	Nigana
var. kimurana Ohwi	Kumoma-nigana
forma albescens Kitam.	Shirobana-kumomanigana
Lactuca indica Linn. var. laciniata Hara	Akino-nogeshi
L. raddeana Maxim. var. elata Kitam.	Yama-nigana
Sonchus oleraceus Linn.	Nogeshi
S. asper Hill (U. F.)	Oni-nogeshi
Youngia japonica DC. (U. F.)	Oni-tabirako
Y. denticulata Kitam. (U. S.)	Yakushi-sô

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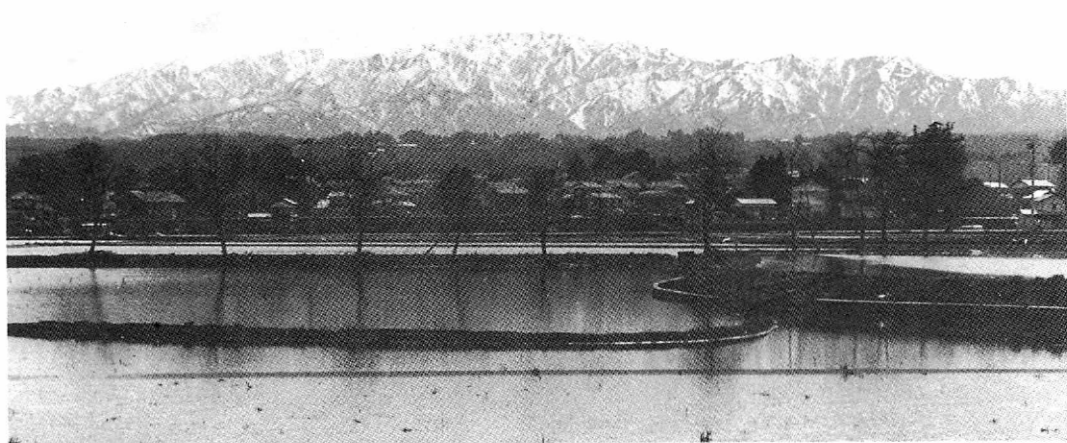
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**Plate 1**

A: View of Mt. Sôgadake from Mikkaichi, Kurobe City.

B: View of Mt. Maekoma and Mt. Komagadake (upper) from Mt. Sôgadake.



A



B

**Plate II**

A: View of Hotokegadaira (middle) and Gozen (upper left) from Mt. Sôgadake.

B: Hedge- formed wind exposed bush vegetation at Hotokegadaira



A



B

**Plate III**

A: Hedge shaped wind-exposed bush vegetation. Seen *Rosa acicularis* Lindl. var. *nipponensis* Koehne and *Taxus cuspidata* Sieb. et zucc. var. *nana* Rehd.

B: Flag-shaped trees are seen in the *Abietum mariesii* (Mt. Sôgadake)





A



B

**Plate IV**

A: Snow patch vegetation (Co. Unazuki. alt. 1600m)

B: So-called "Gaki-no-tanbo" and *Sparganium gramineum* George (Co. Katakaigawa. alt. 1750m)



A



B

**Plate V**

A: *Orchis joo-iokiana* Makino (at Hotokegadaira)

B: *Balanophora nipponica* Makino (Co. Unazuki, alt. 1300m)

C: *Lastrea robertina* Newm. var. *longula* Ohwi (Co. Unazuki alt. 1300m)



A



B



C

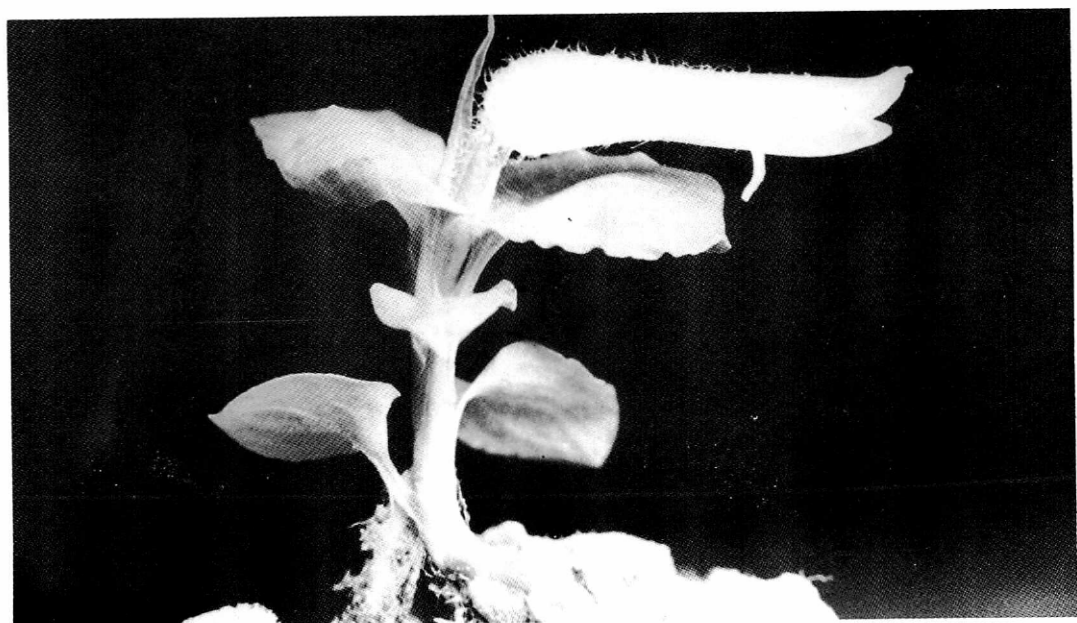
**Plate VI**

A: *Mitella koshiensis* Ohwi (at Fukuhira)

B: *Goodyera macrantha* Maxim (at Unazuki)



A



B